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ABSTRACT

This report is a description of the Flexible Learning System (FLS) project as viewed from the three major work phases of development, research and implementation. The Flexibile Learning System (FLS) began as an outgrowth of the Far West Laboratory's several years of investment in research and development of a Responsive Model of Early Childhood Education for young children. The model emphasizes the development of cognitive abilities and positive self-concept in children as complementary goals. The principal objective of FLS has been to provide a flexible system of teacher education for adults in early childhood education. This report presents a research and evaluation study of the FLS training materials' effectiveness. Included is an historical overview as well as chapters on FLS development which include a discussion of objectives, intended users, changes in development, and developers. Another chapter covers FLS research, and evaluation in four parts: identifying early childhood teaching competencies, the FLS research and evaluation methodology, defining teaching competencies and integrating research, development and evaluation. Two other chapters deal with FLS implementation and dissemination and future development of the project. Appendices of supporting materials comprise nearly half of the volume. (Author/MS)

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THE FLEXIBLE LEARNING SYSTEM:

A Program for Early Childhood Staff Development

PROJECT DOCUMENTARY

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I. INTRODUCTION

Some four years ago, the National Institute of Education in conjunction with the Office of Education Follow Through Program contracted with the Far West Laboratory to develop a set of training materials for preschool teacher assistants. This project, currently titled "Flexible Learning System" (FLS) has gone through several transformations and changes. From its initial conceptualization as a materials development project, it has undergone extensive reconceptualization as a vehicle for working with early childhood staff. It has had three major phases of activity: (1) the development of a set of 15 competency based units; (2) research and evaluation on classroom competencies; and (3) implementation and dissemination.

During the final phase of the project this year, we had the privilege of working with a distinguished Advisory Board which included the following: Dr. Millie Almy (University of California, Berkeley), Dr. Kenneth Howey (University of Minnesota), Dr. Lilian Katz (ERIC Clearinghouse on Early Childhood Education) and Ken Komosky and Dr. David Elliott (EPIE Institute). With their help, the FLS staff considered a variety of ways in which we might share what we had experienced during the life of this project. We are indebted to our Advisors for their constant concern that we somehow communicate and inform other people (e.g., staff of similar projects and funding agencies) who may be interested in such information. The questions addressed to us by our Advisors were: (1) What have we learned? and (2) How are we going to inform people about what we've learned?

The following report is our attempt to answer these questions. It is a description of the FLS project as viewed from the three major work phases of (a) Development; (b) Research and (c) Implementation. Three of the chapters in the following pages deals with each of these phases as a primary content focus. The purpose of this report is to inform the reader about what we have learned during the four year life of this project. In the discussion which follows, we will discuss the problems that were addressed, the questions which were answered, and the questions which remain for future study. It has been our experience that the task of reconstructing and representing an idea to other people requires a reexamination of our thinking and an introspective process that is conducive to our own learning. We appreciate the opportunity to participate in such a learning process and trust that this report will be informative and helpful to you.

II. HISTORICAL OVERVIEW

The Flexible Learning System (FLS) began as an outgrowth of the Laboratory's several years of investment in research and development of the Responsive Education program for young children. Historically, the FLS traces its origins at the Far West Laboratory to the start of the Head Start and Follow Through programs incorporating the Responsive Education model. As early as 1966, when the Laboratory was established and supported by ESEA Title IV, the Responsive Education Program of early education for preschool children had been developed and tried out on a small scale at the New Nursery School in Greely, Colorado. In 1967, its originator, Dr. Glen Nimnicht, joined the Laboratory and began operating a national Head Start program using the Responsive approach. In 1968, the national focus on early childhood led to the expansion of these programs into the Follow Through program which includes children from Kindergarten through the third grade. Follow Through was launched as an attempt to follow-up whatever benefits Head Start had accrued for young children and to expand early stimulation and enrichment programs beyond the preschool ages. In the same year, the Responsive Education program was established as a sponsor for a number of Follow Through sites. At present, the Responsive Education program staff is engaged in installing, maintaining and evaluating this approach at 14 sites across the country.

The assumptions of the Responsive Education model are that children learn at different rates and in different ways, and above all, they learn best when they are interested and motivated to learn. Therefore, the school environment must make provisions for these differences and respond to the needs of individual children. The model emphasizes the development of cognitive abilities and positive self-concept in children as complementary goals for a successful early childhood program. A Responsive classroom is one in which children are free to explore the environment. Activities are self-rewarding. Children work at their own pace, receive immediate feedback, and are encouraged to make their own discoveries.

It is evident from the above brief description, that the Responsive Education model has a philosophy compatible with other models emphasizing a developmental and individualized approach to working with the young child. These approaches assume that by helping teacher understand the nature of the young learner, the teachers can develop a conceptualization of the "why" of the underlying reasons for activities and ways of working with children in the early childhood classroom. Further, by understanding the "why", the teacher can then devise the "what" and the "how." These assumptions mean that the staff development program should allow teachers to develop insofar as possible, their own values, styles and techniques rather than specify precisely what the teacher is to say and do. Thus, one of the major concerns of the Responsive Education Support programs was and continues to be "flexible" early education staff development.

In addition to the above programmatic need for a staff development program, there were two additional factors which provided the original impetus for the initiation of the Flexible Learning System project: (1) the historical life expectancy for Head Start and Follow Through programs; and (2) the increasing need for trained day care personnel and for training programs to be used as career ladders for paraprofessional workers.

The first factor meant that as was the case for Head Start programs, Federal support for the sponsors of Follow Through programs would also be withdrawn in the foreseeable future. This implied that the sponsors, such as the Responsive Education staff, would no longer be able to provide staff training and support to their program sites across the country. Further, it was also becoming clear that the use of workshops alone left much to be desired in terms of a sustained impact on field practices. In the face of such projections, it was critical to develop a "legacy" of training materials which could be left in the hands of field site staff. The second factor was a recognition of a growing need for trained child care providers as an outcome of two major societal changes in the role of women in this country: (1) more mothers were going to work and needed help with their children; and (2) more paraprofessionals were interested in improving their skills and moving up the career ladder.

The Responsive Education experience in training of personnel during the years prior to 1973 presented a valuable source of expertise from which to develop such an exportable training system. Early in 1972, Dr. Nimnicht received funds from the National Institute of Education to develop and evaluate a prototype system to prepare paraprofessionals for careers in preschool education. This was the origin of the Flexible Learning System. The Basic Program Plan drawn up in March, 1972, outlined a three-year development effort. The basic "building block" was the competency unit, and the system included a specific set of these units. By mastering the content of these, the learner was to gain competency in a given teaching content area or skill. Officially beginning on December 1, 1972, and eventually going to November 30, 1976, the program focused on four major objectives: (1) to provide an efficient way to train the large numbers of people who would be required to staff the nation's burgeoning daycare programs; (2) to provide, within the context of the first goal, a career ladder for low-income people, both those involved in daycare at the outset and those who would become involved in it, whereby they might receive course credits and, eventually, certification as teachers for their participation in training; (3) to provide inservice training for a wide range of personnel in on-going preschool programs; and (4) to improve one or more teaching competencies of the learner's choice by working with a particular group of children on a specific teaching problem or goal.

Based on the above objectives, the FLS program included six components:

Component I.

Identification of competency units. This component provided for built-in revisions to be made in 1974 on the basis of work up to and including 1973. As shown in Table 1 in the next three pages, forty-four units were originally proposed.

All early childhood education staff--teachers, assistant teachers, program directors, parent coordinators, and social service workers--were to be trained in the system. Different sets of competencies were specified for each role, and an individual would choose areas where training would be most helpful. Two levels of competency units were planned, one for personnel working with children ages three to five, and another to serve those working with kindergarten through third grade children. Similarly, as described in the footnotes for Figure 1, varying degrees of mastery were envisioned for a given competency depending on the role of the staff person. For example, while a program director need only be able to recognize a certain behavior as characteristic of a teaching competency, a teacher must be able to recognize it, duplicate it in practice, and demonstrate the ability to generalize from one behavior to another.

Table 1

RELATION OF COMPETENCY UNITS, ROLES AND REQUIRED LEVELS OF COMPETENCY FOR ADULTS FILLING DIFFERENT ROLES WORKING WITH CHILDREN

	Level of Competency for Each Role					
Competency Unit	Teacher Assistant	Teacher	Program Advisor	Program Director	Parent Coordinator	Social Services Worker
1. Understand total program*	1	1	1	1	1	1
2. Model language for children	2	3	4	2	-	-
3. Develop child's language skills*	2	3	4	1	-	-
4. Develop child's relational concepts**	2	3	4	1	-	-
5. Develop child's category concepts**	2	3	4	1	-	-
6. Develop child's social concepts**	2	3	4	1	-	-

The numbers in the body of the table represent the following levels of competence:

1. Verbal recall: The knowledge of something as expressed in verbal or written form, or the ability to identify a behavior when seen in a classroom or on videotape recording.

2. Produce behavior: The ability of the adult to produce the desired behavior.

3. Generalize behavior: The ability to recognize that the adult has himself produced the desired behavior, or the ability to generalize from one behavior to another.

4. Teach behavior: The ability to recognize that the adult himself has produced the desired behavior, can generalize from it, and can teach the behavior to someone else.

* An asterisk beside a competency unit indicates that the competency unit will contain different content for adults working with the three different age groups (ages 6-9, 3-5, and 0-2) but the procedure will remain the same.

** A double asterisk indicates there will be considerable change in the competency unit for the three different age groups.

No asterisk indicates that there will be no change from one age group to another in the competency unit.

Competency Unit	Level of Competency for Each Role					
	Teacher Assistant	Teacher	Program Advisor	Program Director	Parent Coordinator	Social Servies Worker
7. Develop child's problem-solving ability*	2	3	4	1	-	-
8. Use games and other materials*	2	3	4	1	-	-
9. Test young children*	2	3	4	1	-	-
10. Use the child's play for learning*	2	3	4	1	-	-
11. Understand child's language	2	2	4	2	2	2
12. Understand child's background	1	1	1	1	1	1
13. Help child develop healthy self-concept	2	2	4	2	1	1
14. Control children's behavior in a group	2	3	4	1	-	-
15. Help child develop self-control	2	3	4	1	-	-
16. Work effectively with other adults	2	3	4	4	-	-
17. Work effectively with parents	2	3	4	4	2	3
18. Conduct Parent/Child Toy Library *	2	1	4	1	2	1
19. Use Learning Booth	2	1	4	1	-	-
20. Undefined						
21. Organize classroom and materials*	-	2	4	1	-	-
22. Plan for day, week, and year*	-	2	4	1	-	-
23. Evaluate progress of children*	-	2	4	1	-	-
24. Evaluate textbooks for cultural relevance**	-	2	4	2	-	-
25. Explain program to parents*	-	2	4	2	-	-
26. Understand demeaning behavior with racial overtones and eliminate	-	2	4	2	-	-

Competency Unit	Level of Competency for Each Role					
	Teacher Assistant	Teacher	Program Advisor	Program Director	Parent Coordinator	Social Servic Worker
27. Undefined						
28. Undefined						
29. Make classroom observations	-	-	2	1	-	-
30. Critique video-tapes of classroom	-	-	2	1	-	-
31. Determine level of competency	-	-	2	1	-	-
32. Make demonstrations*	-	-	2	1	-	-
33. Conduct workshops*	-	-	2	1	-	-
34. Involve parents*	-	-	2	1	-	-
35. Undefined						
36. Undefined						
37 Set goals*	-	-	-	2	-	-
[illegible] Analyze problems*	-	-	-	2	-	-
39. Derive objectives*	-	-	-	2	-	-
40. Design instructional program*	-	-	-	2	-	-
41. Plan program implementation*	-	-	-	2	-	-
42. Plan program evaluation*	-	-	-	2	-	-
43. Undefined						
44. Undefined						

Note: The undefined competencies (20, 27, 28, 35, 36, 43, 44) are listed in this table as an indication that a number of additional competencies will be defined as work progresses. Eventually, additional competencies will also be defined for Parent Coordinators and Social Services Workers.

Component II.

Identification of the resources available for development of competency units. This component stipulated that three types of materials would be used in the assembly of competency units: those already developed for existing Head Start and Follow Through training programs; those from other divisions of the Laboratory; and those that other developers in the field might produce.

Component III.

Development and testing of individual competency units. This was correctly expected to require the largest share of time and funds over the course of the program.

Component IV.

Development and testing of the system and competency clusters for a given role was to begin in 1974. It was proposed that developers would test various combinations of competency units by working with different sequences of competency units. The entire system would be evaluated through the longitudinal assessment of a group of trainees over a three-year period.

Component V.

Development of relationships with colleges and universities to work out a system for providing credit based upon the competency units and levels of competency. This career ladder component included plans to arrange for college recognition of the training and to relate the FLS units to established programs for certification and in-service crediting provisions. It was proposed that by 1975 and 1976 at least four institutions across the country would be involved in the program.

Component VI.

Development of a plan for dissemination and utlization. This entailed producing each unit as a self-contained entity, and disseminating them through the participating educational institutions, as well as through professional channels and journals.

The above six project components were to undergo a number of changes before the end of the project on November 30, 1976. In the following sections, we will discuss the major changes of these components as subsumed under the three major program activities of Development, Research and Implementation.

Nature of Final FLS Program

The historical background of the FLS project would not be complete without a brief overall description of the nature of the FLS program at the time of this writing. The FLS is now composed of 15 competency units which constitute a prototype training system for early childhood staff (see appendix for detailed descriptions). These units represent only an initial array of skills which are considered important for staff in early childhood education. They are certainly not sufficient in number or comprehensive enough to cover all potential competencies that an educator should have. Rather, the skills represented in the 15 FLS units may be considered as a starter set of critical teaching competencies upon which further staff growth and development may be built.

The philosophy of the FLS program is embedded in the particular way in which these content areas are presented to the learner. In keeping with the focus on a competency based program, the emphasis is not so much on what (i.e., content alone) is presented but how (i.e., process of training) the learner goes through the training program. In keeping with this objective, the FLS units share three major characteristics in that they are: (1) learner centered, (2) functional in context, and (3) competency based.

The FLS is learner-centered at three levels: at entry into the system, during the process of training, and at exit from the system. Each potential trainee who enters the system has the opportunity to select units of personal interest, to determine the sequence in which they will be learned, and to set a comfortable personal pace for proceeding through the units. During training, teachers as learners have the opportunity to try out what it feels like to be child learners in the situation which they are being trained to deliver. For example, they are provided with experiences to role play teaching situations in which they play the role of the child, and they are provided with experiences in which they try out their teaching skills with other adults who can provide them with feedback on how they are doing. At the completion of formal training, the learners are asked to extend their learnings beyond the unit, to "personalize" their learning to fit their individual setting, children, and personal and programmatic teaching values.

The FLS provides a functional-context experience in that it is designed for learning while on-the-job. Each unit provides opportunities for daily application and practice with young children aged three to nine.

The Flexible Learning System is competency-based in that it is based on the doing of teaching acts, not just reading about or hearing about them. The competent teacher is one who can work directly with children effectively. This requires behavioral skill, not just conceptual understanding.

III. FLS DEVELOPMENT

The task of development of the FLS materials may be viewed from many perspectives. Some of these perspectives were introduced in the originally proposed components and included items such as the intended audience of teacher assistants and the identification of the specific competencies for the system of units. As the FLS project progressed, a number of additional perspectives also became important. In the following sections, we will discuss these perspectives in terms of three general issues or concerns: (1) changes in the original proposed program; (2) reason(s) for the changes; and (3) implications of the changes.

Perspective A: Who are the intended users?

The original title of the FLS project included the phrase "for teacher assistants." In terms of the historical and political situation five years ago, there appeared to be a tremendous future for trained paraprofessionals in preschool programs. Since then the situation has changed--there may still be a shortage of trained personnel, but the problems of decreasing school enrollment has led to the "downgrading" of teachers from the upper-grades to fill these positions. Thus, there is less support for the training of a large number of new professional preschool workers.

In addition to a change in societal priorities, there was a more urgent need to change the focus on teacher assistants as the principal user population for FLS. During the field testing phase of unit development, it became increasingly clear that the training of teacher assistants could not be fully implemented in the classroom. The emphasis on competency-based training in the FLS units required the learner to do activities in actual classroom situations. For example, the unit on "Classroom Arrangement" included the planning, use and evaluation of different physical arrangements in the learner's own situation. As might be expected, many of the teacher assistants were not permitted to accomplish all these activities. It was apparent that a classroom-based training program could not be effective unless the decision-maker(s) in the classroom were involved. This finding led to the reforming of the FLS program so that it was expanded beyond the teacher assistant to include all members of the teaching team.

The above change in user population led in turn to a change in the title of FLS so that it was "for educators" rather than for the teacher assistant. As might be expected, the change in title has implications for the nature of the FLS training program. The notion of an educational team of concerned adults working together is implicit in the title change. Further, it was assumed that if a team of adults is to work together effectively, the training program must reflect the working situation. To paraphrase an old saying: "As the team is trained together, so shall the team work together." This means that the optimal user audience would include teacher, teacher assistants, parents, administrators and any other adults who are members of the team of concerned adults working with a particular group of children.

It has been our experience that the development of an underlying trust relationship is one outcome of our FLS training workshops for trainers (see section on "Implementation"). It has also been our experience that one of our earlier Laboratory projects (Parent-Child Toy Library) also resulted in an improved relationship, this time between the parent and the child. Both of these projects resulted in a change in relationships, but this was not the expressed goal of these programs. That is, although the intent of a program may be to develop a sense of togetherness and understanding between parent and child, one cannot ask parents to come to a series of sessions by saying "We want you to come to some workshops so that you can develop a better relationship with your child." Instead, we phrase the invitation in another way, such as "Come and we will show you how to use some toys and games with your child."

In the same way, the development of a team relationship among adults cannot be specified as the only overt goal of a program. However, the process of having adults train and learn together can be a most effective strategy to effect this goal. The training program is the means, the goal is the improved relationship. Of course, it goes without saying that the nature of the training program must be supportive of this change in relationships. By this time, we have had some experience which says that the FLS materials can be effectively used in this way.

One other change in terms of the intended user of the FLS program was the change in the age of children from "preschool" to the "early childhood" level. This resulted from two causes: (1) an interrelationship with the staffing of the project and (2) the nature of the issues addressed by the FLS units. The first factor was concerned with the developers for the initial FLS units. The original proposal included the use of funds from the Responsive Education program to pay for the support of their trainers as developers of the FLS units. In terms of this relationship, it was reasonable that these FLS developers would wish to coordinate their development activities with their primary responsibilities as Follow Through trainers. This led to an increasing reluctance to develop units solely for a preschool audience when their own priorities were at the K-3rd grade level.

As the early units were developed, another factor emerged that was related to this question of the age range to be addressed. This factor was the nature of the competency units that were developed. The issues being addressed in many of these units tended to be age-free. For example, there were notions of developing a positive self concept, integrating language, arranging the classroom, identifying characteristics of early childhood programs, working with parents, etc. All were applicable to more than the preschool level.

Both of the above reasons were influential in helping to make the decision to change the primary audience for the FLS program from the preschool to the early childhood educator. This decision in turn led to a reconsideration of what resources were to be used as content for the units. As originally proposed in Component II, the materials which had been previously developed through other programs were to be used in the FLS units. The change in age focus facilitated this usage in some units and not in others. For example, the development of the FLS unit on "Selecting Materials from a Black Perspective" for K-3rd graders was facilitated by the existence of a unit on selecting similar materials for the elementary grades. On the other hand, the use of the Parent-Child Toy Library preschool training materials needed considerable expansion to be adapted for the changed age focus of the FLS materials. This meant that more time needed to be spent in this conversion.

Another change in the user population was the change from the individual learner to that of an individual as part of a group of learners. In the early stages of the FLS project, a great deal of emphasis was placed on the provision of a Q-sort whereby the individual learner could select the particular competencies he/she needed to study. However, the nature of the FLS training was based on the use of a process-oriented approach to training which essentially necessitated the use of a group. The sharing of the learner's personal experience, the comparison with other's perspectives, the reexamination of one's own perspective, the reconstruction of a new position incorporating the perception of others--all of these processes of learning required the presence of a group of learners.

Thus, the notion of the individual learner working his/her way through a FLS unit is no longer appealing. However, the use of a Q-sort technique to assign priorities has not necessarily been eliminated. That is, instead of identifying the priorities of the individual, the same technique may be used to identify the needs of a group. As originally designed, the Q-sort procedure asked the learner to make two sortings of a set of cards. Each card described a competency such as "ability to read stories to children." The cards were first sorted into piles of specific proportions according to "Those which I feel are important in my job" vs. "Those which I feel are not important. The second task was to sort the same cards into piles representing different degrees of "Those competencies which I can already demonstrate" vs. "Those competencies I need to develop." The starting set of training competencies was based on these two card sorts, i.e., the cards which fell into the dual category of "Those I think are most important" and "Those I need to develop."

The modification of the above procedure for group use merely required that the final selection of competencies be based on the five highest priorities of the group. That is, the trainer started with the one unit which was common to the first five priorities of the learners in the group. It has been our experience that the probability of having such a unit in common is extremely high. The use of this procedure, of course, affords the learners a sense that their own needs are influential in the selection of their training program.

One final change in the intended audience also needs to be discussed. As described in the section on historical background, much of the original impetus for the FLS program grew out of the training needs of the Responsive programs. Thus, the initial set of competencies included those related to the use of the Learning Booth and the Parent-Child Toy Library. Further, the development of a one-day assessment instrument as part of the FLS system was based on the assessment of the classroom as related to the specific Responsive Education program priorities.

However, as the FLS units were developed, tested,and implemented by our FLS training program, it became apparent that the purpose of the FLS materials was the development of responsive educators rather than development of a particular model called Responsive Education. This may seem to be a subtle difference, but it is an important one. The FLS units as finally developed are not designed for the purpose of creating a program or a model. They are designed for the purpose of introducing and facilitating the learners' use of responsive principles as part of a training program.

Thus, because the FLS is restricted to a particular medium and to a particular set of circumstances, it has its own manifestations, and, in many regards, is separate from the Responsive Education program, not only by virtue of what it is and how it shares, but, because it has a different function than the Responsive Education Program. The latter is concerned with the implementation of a particular educational model within a school, or a community of schools. Its thrust is program implementation and therefore, has particular ways of working and particular concerns that must be addressed which are not related to the concerns of FLS.

An important implication of this change is the usefulness of the FLS program for a wide audience of users. For example, there are a large number of trainers who are interested in working in more process-oriented ways in training. The currently available training materials are not useful to them and yet they cannot find time to develop their own units. Further, they are not interested in replicating any specific model of education. Many of the trainers in our FLS workshops this past year exemplified this need. Their perception of the usefulness of the FLS materials for their purposes is discussed in the section on Implementation, but it is clear that the FLS audience has been extended far beyond the originally intended audience of programmatic users.

Perspective B: Which units are to be developed?

As shown in Figure 1, the original FLS proposal identified a matrix of more than 40 competency units to be developed. It also selected a set of 21 units to be developed as the initial development focus of the FLS project. The selection of these units was based on the field-based priorities of the Responsive Education program. That is, the 21 units were those that the Follow Through Staff felt were most needed for the training of teacher assistants.

During the second year of the program, there were two different events that led to a reduction in the number of units from 21 to 15 units. The first event was a reduction in the level of participation by the Follow Through program. A change in their funding pattern required that they severely restrict development activities so that their staff members could not continue to develop all the FLS units. The second event was a shift in NIE priorities from the support of development to a greater emphasis on research and evaluation. The net result of both these events was a recasting of the original set of 21 units into a more limited set of 15 units. The term "recasting" rather than "reducing" is used, because there were a variety of procedures used in affecting the

the changes in the number of units, i.e., combining similar units, expanding some units, revising some units, adding new units, etc.

To clarify the changes made, the following is the original list of units and the changes that were made:

FLS UNIT	CHANGE
Understanding Total Program	Introduction to Early Childhood Education Programs
Use of Toys and Games	Expanded for K-3
Use of Senses and Perception	None
Concept Formation	None
Understanding and Eliminating Demeaning Behavior	Combined
Helping Children Develop Healthy Self Concepts	
Ability to Administer First Aid	Dropped
Developing Children's Problem-Solving Ability	Combined:
Developing Children's Social Concepts	
Assessing Children's Needs and Progress	Expanded into 3 manuals
Analyzing Materials for Blacks and Chicanos	Separated into 2 units
Developing Children's Language Skills	Combined: Integrating Language
Modelling Language Skills	
Understanding the Child's Language	Enriching Literature Exper.
Using Spontaneous Play for Learning	Observing Spontaneous Play
Working with Parents	None
Understanding the Child's Background	None
Managing Classroom Behavior	Combined: Classroom Management
Helping Children Develop Self Control	
Managing Children's Behavior in a Group	
Working Effectively with Other Adults	Dropped
Classroom Arrangement	Added

Some of the changes above are self explanatory, particularly those related to combining similar units. The expansion of units requires some explanation. The "Assessing Children" unit remained as a single unit; in contrast to the other units, there are three "manuals" within the unit. This was necessitated by the volume of material developed for the use of a Piagetian approach to working with children in the areas of classification, seriation and number. The "Analyzing Materials" unit became separated into two distinct units for reasons which were primarily political. At the time this decision was made, an issue was raised regarding the desirability of such an approach, i.e., that this separation would necessitate the development of further units for "Asians", "Native Americans", etc. However, in terms of the needs of the Follow Through program, it was clear that the population to be addressed was predominantly Black and Chicano. It was thus decided that each of these groups required separate treatment.

The other major changes involved revisions of actual content of FLS units. These changes were generally directed by staffing issues. The unit on "First Aid" was dropped because there was no one on the staff with the appropriate background and a developer would have had to be hired for this purpose. The change of "Understanding Language" into a unit on "Children's Literature" occurred because this developed as a need in the Follow Through program and they had just hired a new trainer for this purpose. The "Working with Other Adults" unit was dropped because the staff member assigned to its development left the Laboratory. Finally, the "Classroom Arrangement" unit was added because it became apparent that there was a need for such a unit, particularly when the audience changed from the Responsive Education program users to the general audience of early childhood educators.

The above changes resulted in three major implications for the FLS program.

The first was that with only 15 units (out of more than 40 units), the concept of the FLS as a system needed to be reexamined. That is, there were were no longer enough units to proceed with the original assessment ideas of cluster evaluation or total system evaluation.

This led to a reconceptualization of the assessment activities connected with FLS. The specific nature of this rethinking is described in the following section on "Research." However, there was a major shift from the use of instrumentation for assessing system effects to that of assessing the effects of single units.

Another implication of the reduction in the number of units was a surprising change in the units themselves. As the number of units was curtailed, there was the development of an interesting phenomena--the units became longer and more extensive. It was as if the developers felt that they had to cover the same amount of material in fewer volumes. The result is that the majority of the units now require from 8-12 weeks of training time.

A further implication which is important for the future use of the FLS program is that with the reduction of units it can no longer be considered a comprehensive training program. Rather, the FLS should now be viewed as an initiating set of training materials. This change is by no means a disadvantage. As described earlier, this perspective of a "starter set" of materials is particularly helpful to the present FLS user population.

Perspective C: Who will do the development?

This issue has been touched on in previous sections. During the early part of the FLS program, most of the developers were part of the Responsive Education program. However, with the changes in funding support described earlier, there was a change in staffing so that the final FLS staff included only one member who came from the Follow Through program.

The expertise of the early FLS development staff was based on a wide experiential background in the general field of early childhood education as well as in the Responsive program. For example, FLS developers had from 6-22 years of experience in the early childhood field (mean: 9.8 years). Their background included a variety of experiences as teachers, teaching assistants, project directors, program advisors, teacher trainers, resource teachers, team leaders and demonstration teachers. In regard to academic training, only one developer had less than a master's degree, 3 had doctorates and 2 were in doctoral programs. More importantly, the majority of the development staff had been working in the Responsive Education program for at least 5 years. This meant that the developers were thoroughly familiar with the philosophy of the Responsive Education program and had had extensive experience in implementing this approach in ongoing school situations. The background of the FLS research staff included teaching and research with a range of 7-9 years in early childhood and 2-5 years of actual classroom experience. Further, the team of 9 field data collectors and coders each had had at least 2 years of experience in early childhood classrooms. It would appear that the experiential base of both the development and research staff was appropriate to the task of developing the FLS program.

According to the procedure described in the original proposal, the development staff were to work as a team on a cluster of units at a time. This approach was never fully implemented because of a number of reasons. First of all, the initial developers were trainers attached to the Follow Through program. These trainers had been selected to represent particular areas of expertise such as "self concept", "language integration", "problem solving", etc. There was an understandable preference for working as individual-developers on units in their own particular areas. Further, in keeping with the learner-centered philosophy of the program, the first program director, Glen Nimnicht, encouraged and valued the development of units which reflected the unique personal training style of the developer. He felt that it was important to have different types of units in the system so that learners would be exposed to a variety of training styles. Further, he hoped that the variety would provide a modeling base for trainers who were interested in becoming developers.

Thus, both the personal preference of the developers and the early management of the project led to a highly individualized approach to development. Unfortunately, this approach was not entirely compatible with meeting the scheduled deadlines of the development cycles for the preliminary and main field tests of each unit. A recognition of the need for a more systematic management system led to the development of a series of steps which were given to the developer to follow in the development of a competency unit. The criteria for unit development consisted of seven developmental stages involving a total of 83 discrete criterion steps (see appendix). A project manager was assigned to the task of monitoring the progress of the competency units under development through these stages. The result was that there was a greater effort to regularize the development process, but the schedule was sometimes met at the expense of a lower level of quality. This is not surprising in view of the fact that if some developers were having difficulty in meeting production deadlines, the remedy may not lie in adding more paperwork and more deadlines .

Another issue which is related to the individualized approach to development is the assumption that a competent trainer is always a competent developer. A trainer who is skilled in a highly individualized approach to training may find it extremely difficult to set down a general set of procedures in the form of a unit which can be used by all learners. In one sense, the very skill that permits a trainer to be constantly flexible in his/her training program mitigates against his/her success in organizing it into a particular sequence of activities.

Given this difficulty, it is surprising that almost all of the trainer/developers were able to make this transition. This is not to say that there is no variation in the final quality of units produced. There is a great deal of variation, along a number of dimensions. These include the level of organization, the clarity of presentation, the applicability of ideas, the use of examples, the quality of reading selections, the cohesiveness of content, etc. However, although each of the units was developed in a unique style, reflecting both the nature of the subject matter and the personal style of the developer, our training experience with them this past year indicates that the units shared an underlying philosophy, approach, and field experience.

The "who" related to the development of the FLS units also must include a group of internal and external reviewers. This review system was instituted by the current project director as part of a larger effort to obtain professional feedback and to provide information on the units for formative assessment purposes. With the decision to use outside reviewers, the developers were encouraged to recommend reviewers whom they felt would understand the nature of their unit. The final selection of the reviewer(s) was based on mutual agreement between the developer and the project director. Table 2 presents a list of the reviewers for each unit. The first four units were developed prior to this process. The internal review team varied for different units and was selected during the Identification stage (Step 1 D) described in the

R & D outline in the appendix. Much of the feedback from external reviewers to individual developers was in the form of conferences attended by the internal review group, as well as the developer.

The external review system has provided feedback which is extremely supportive. For example, the reader may be interested in the following comment by Dr. Fred E. Newton, the external reviewer for the unit, "Teaching Language Skills in an Integrated Way":

> How is (or how isn't) what has been written important in the field?
>
> "The unit is important to the field of education for three reasons. First, the unit offers a rare occasion when there is a consistency within the curriculum unit between the content and the teaching structure. Here the unit is consistent with the "how to teach" criterion taught in the unit. Specifically, if one holds that language is an "inside-out" process, as is the position in the unit, then the teaching structure which begins with what's inside the student, i.e., his own experience, is consistent and makes sense. What the unit is actually teaching the student is a process, which can be generalized to any group of students, any curriculum area, for any particular activity. Few curriculum units carry this kind of power yet that is the crucial need in the field, and, practically, the only kind of unit we can afford to spend time on."

Table 2

FLS Program List of Reviewers

Work Unit III	Reviewers	
	Internal	External
Introduction to Early Childhood Education	Dr. Glen Nimnicht Dr. Marta Ziegenhagen	
Class Concept Formation	Keith Alward Dr. Barry Barnes Margot Biestman	
Toys and Games	Dr. Glen Nimnicht Dr. Marta Ziegenhagen	
Senses and Perception	Keith Alward Joseph Martinez	
Work Unit IV		
Problem Solving	Keith Alward Margot Biestman Dr. Masako Tanaka Dr. JoEllyn Taylor	Dr. Millie Almy University of California, Berkeley
Self-Concept	Jean Monroe Margaret Robinson Joanne Yinger	Dr. Stanley Coopersmith University of California, Davis
Physical Arrangement of the Classroom	Judy Brown Stanley Chow Nat DeAnda Jean Monroe Dr. Masako Tanaka	Thelma Harms University of California Child Study Center
Analyzing Materials for a Black Perspective	Nat DeAnda Jean Monroe Margaret Robinson Dr. Masako Tanaka	Alma Maxwell Department of Afro-American Studies, San Francisco State University Geraldine Wilson New York University
Analyzing Texts for Chicanitos	Nat DeAnda Francione Lewis Dr. Jim Vasquez (Co-Director of FWL General Assistance Center)	Dr. John Chavez University of California, Berkeley Dr. Edward D'Avila, Director of Research, Bilingual Children's Television Program Dr. Carlos Cortes University of California, Riverside

Work Unit IV	Reviewers Internal	 External
Literature Experiences for Young Children	Keith Alward Margot Biestman Stanley Chow Dr. Masako Tanaka	Dr. Dewey Chambers, University of the Pacific
Integrating Language Skills	Francione Lewis Dr. JoEllyn Taylor Joanne Yinger	Dr. Fred Newton, Northwest Regional Educational Laboratory
Spontaneous Play	Margot Biestman Jean Monroe Margaret Robinson Dr. Masako Tanaka Joanne Yinger	Dr. Millie Almy, University of California, Berkeley
Communicating with Parents	Stanley Chow Judy Hubner Francione Lewis Jean Monroe	Dr. Dorothy Seiden, San Francisco State University
Classroom Management	Keith Alward Margot Biestman Dr. JoEllyn Taylor Dr. Masako Tanaka Joanne Yinger	Dr. Betty Halpern, Bank Street College of Education
Assessment of Children's Thinking	Stanley Chow Judy Hubner Dr. Masako Tanaka Terry Taylor	Dr. Millie Almy, University of California, Berkeley

Another group of "whos" which requires consideration is the administrative support system of the FLS project. This includes the Project Directors and the NIE program monitors. As described in the historical overview, the first Project Director was Dr. Glen Nimnicht. After the initial three months of the project, the direction of the project was turned over to Dr. Marta Ziegenhagen. The present Project Director, Dr. Masako Tanaka, joined the Laboratory in May, 1973 as Associate Division Director to Dr. Nimnicht. Several months later, both Drs. Nimnicht and Ziegenhagen left the Laboratory and Dr. Tanaka was made Division Director and FLS Project Director. The project was affected by the change in leadership in that Dr. Nimnicht was the philosophical and conceptual leader of the Responsive Education program and his loss was greatly felt by the staff members, particularly since he had been responsible for hiring and supervising all of them for a period of more than four years.

The FLS has also had a number of changes in terms of NIE project monitors. In addition to Mary Johnson who was named in the original proposal, there were six other monitors during the period from March 1, 1973 to November 30, 1976. They were as follows:

Date	Project Monitor
3/1/73	Mary Johnson
3/1/73	Martin Engels
6/29/73	Kent Sullivan
12/1/73	Tom Chibucos
5/1/74	Mary Jackson
3/1/75	Kent Viehafer
9/15/75	Esther Perry
6/1/76	Kent Viehofer

As indicated above, the terms of project monitoring ranged from 4-10 months. In terms of the stability of project support, this situation has been a very difficult one for the FLS program. It has required a considerable amount of staff effort to provide project orientation for each new program monitor. Further, there has been the constant concern that the relationship between the program staff and the project monitor has not been sustained for a period long enough to develop a sense of communication and understanding. For example, our only visit from a Review Team occurred in September, 1975 and they were accompanied by a Project Monitor who had just been assigned to the FLS the week prior to the visit. It is apparent that the experience of the FLS project reemphasizes the critical need for a sustained monitoring role that provides for the growth and development of a mutually satisfying and supportive relationship between a project staff and the funding agency.

The final (and perhaps most important) "who" in the development of the FLS program has been the large group of educators who have worked with us at all different stages of the project. Starting with the early preliminary testing phases through the main field tests and operational tests, we have worked with a large number of trainers, teachers and teacher assistants, parents, administrators and other members of the early childhood team. It has been an extremely rewarding experience in that we as FLS staff have been part of the "learners" addressed by the FLS program. Further details as to what we have learned will be found in the section on "Research" and "Implementation."

Perspective C: What is the form of the units?

This question needs to be addressed at two levels: the covert and overt characteristics. The covert question is perhaps the most difficult one, i.e., how does one go about converting a process-oriented approach to training into a set of paper-and-pencil units? The overt question regarding the units considers the decisions that were made in the production of the final format, design, packaging, etc. of the FLS materials. The following sections address each of these issues.

The problem raised by the feasibility of using written materials is generic to all process-oriented programs. Our experience with the FLS as it is written and as it has been used, and the experiences that led to its formation, are very different from the kind of training that can be easily recreated through print. The helping of people to develop their skills in working with children, colleagues and adult students, has depended upon a close way of working and a variety of other considerations, such as: a way that accommodates individual and unique experiences, needs and questions; a way that allows learners to provide their own focuses and learning activities; a way fo help them find resources for solving problems generated for and by themselves; and a way to encourage them to freely pursue problems and questions that arise in their pursuit of other answers. All this requires a very flexible dynamic way of relating to people. It requires the sensitive handling of sometimes emotional conflicts between ideas and between people and a wide range of human experience has been entailed in developing the FLS. The richness of this experience and the responsibility to transform it into written material represented a conflict. This conflict presented the paradox of trying to maintain a simultaneous adhereence to a philosophy of individualized, active and constructive learning and the belief that this approach can be brought to bear on the lives of children through the production of printed teacher training materials. Likewise, it is our belief that knowledge is constructed by the learner, and that central to this process is the provision of opportunities for the learner to control and manipulate the learning environment.

The FLS staff felt that the resolution of this paradox could only be achieved by somehow infusing into the FLS written materials the personal, interactive, and dynamic styles and the sensitivities of people trained to work with adults. This position led to our commitment of working with trainers to develop such capabilities. Our experience in training trainers is described in the section on Implementation. In addition, some of the conditions which we learned are necessary to realize the richer experiences the FLS has to offer are more fully described in the paper, "Elements of Training" to be found in the appendix.

In addition to the role of the trainer, the FLS units themselves incorporate a concern for a process approach to training. This may be illustrated by describing the general organization of each of the FLS units. Although each of the 15 units of the FLS were developed in a unique style reflecting both the nature of the subject matter and the personal style of the developer, there are six procedural steps common to the training process used in most of the units.

First, each unit begins with an introduction which includes performance objectives, learning methods, and learning materials and estimates as to the length of time needed to complete the unit. The second step involves a conceptual presentation of the subject matter of the unit. This may involve studying the unit content and participating in discussions led by the trainer. The third step is aimed at conceptual integration. Activities are presented which require personalized application of the basic concepts and ideas in the unit.

Once the groundwork of conceptual understanding has been laid, the fourth step requires behavioral production of particular teaching skills. This may involve role-playing sessions with other group members, or trying out the new concepts in devising lesson plans. The fifth step is classroom application. At this point, learners are provided with activity guides that enable them to apply the skills they have learned while working with children in their own classrooms. The sixth step is intended as the final outcome of each of the units. It involves the learner's "personalization" of the training experiences for application to his/her own situation. This requires a "thinking through" of personal teaching goals and a revision and extension of FLS training to facilitate achievement of such goals.

Criteria are described for self-evaluation throughout the learning process and for determining the levels of competence obtained after studying the unit. Verbal recall is the first type of competence and may be demonstrated either by written production or by observational identification of a competency. The second type of competence requires the production of a learned behavior. The third type can be demonstrated by the generalization of the learned behavior, for example, creating a new learning episode. The fourth type of competence is demonstrated by going beyond what was learned in the unit by taking ownership of the skills developed in the unit and developing a personally relevant form of expressing them. Finally, the fifth type of competency involves demonstration of ability to teach to others the skills in a unit, and is usually required of a trainer.

The above set of organizational characteristics is one part of the overt form of the FLS units. Another aspect of form is the use of audiovisual materials as part of individual competency units. According to the original proposal, the FLS units were assumed to have a large number of audiovisual elements.

However, the final set of 15 units includes only 3 units which have additional materials such as videotapes, film or "hardware" (i.e., toys and games). This difference was the result of a number of contributing causes.

One of the major causes appears to have been the problem of time. As described earlier, there was a great deal of difficulty in having the development of the FLS units proceed according to the proposed project schedule. The milestones became millstones. Many of the developers felt that it was almost impossible to create the units in the time alloted and that the further development of audiovisual components simply could not accomplished in the time given.

Another major cause may have been the developers preference to work in a media (paper-and-pencil) which was familiar and manageable. As might be expected, the three developers who did use film and videotapes found that these media required an enormous amount of planning and coordination (e.g., setting up filming dates with schools, obtaining releases, supervising filming, etc.) as well as the additional changes which were extremely time consuming and exhausting (e.g., editing, writing script, dubbing, supervise transcription, etc.). In two of these cases (units on "Play" and "Exploring Children's Thinking"), the developers felt that they had learned an enormous amount and had gone through an exciting and challenging experience. In another case ("Problem Solving"), the developer's use of a porta-pak video camera produced a film which was adequate for viewing but was not of reproducible quality.

This question of reproducibility is an issue which warrants further discussion. In producing operational units from field testing forms, the FLS staff gained some of the following experiences with this problem. They are described below for the purpose of alerting other people who may be working on similar projects.

1. The quality of the field version must be adequate for reproduction purposes (see previous paragraph). This often means that the budget must provide professional support for audio-visual components.
2. If illustrations are used from copyrighted materials, the permission to use these must be transferable to the final form of the material. In the case of one of the FLS units ("Analyzing Chicano Materials"), the publishers withdrew their permission to use a number of illustrations when they discovered that the pictures were being used to exemplify undesirable elements in children's books. This meant that the production of the operational form of the unit required the services of an artist to make appropriate drawings.
3. Questions of layout (e.g., single vs. double column) should be considered from a pragmatic as well as aesthetic point of view. One of the FLS staff members in charge of producing the earlier units had a great deal of background experience in dissemination projects and he decided that the FLS units would be more attractive if they were printed in double columns. This required more time for typing and editing (2 sets of margins and syllabifications at ends of lines). Further, the writing in of learner responses and records was awkward because the space was columnar rather than across the page. The field reaction to this latter problem led to the discontinuing of the double column format for the later FLS units.
4. Whenever possible, the convenience of the user should be of paramount importance. The feedback from the field versions suggested

that learners preferred to keep their used Units in binders so that they could insert additional sheets. Further, many of the trainers requested permission to reproduce the response sheets so that they could use them with a larger group. These ideas were incorporated into the operational form of the final set of FLS units so that they included three hole punched pages and perforated (to tear out) response sheets.

5. If Instructor Manuals are produced, they should incorporate the learners' materials. This procedure eliminates the problem of the Instructor standing with a manual in one hand and a learner's edition in the other. By printing the Instructor pages on a different color of paper (we used lime greem), the sections are readily observable. Further, the "green" pages can be printed separately and paginated so that the user can do the insertion. This saves the cost of printing a special instructor's guide with 2 colors of paper.

Summary

This section on Development has addressed some issues related to the task of developing and producing a set of competency-based learning units for early childhood educators. It is apparent that although the perspectives were treated separately, there was a great deal of interrelationship among the development staff, the content of the FLS units and the form in which they were finally produced. One further important aspect of the development of the FLS units and training program still remains to be addressed, and that is the role of formative research. This concern is described in the following section which describes the FLS experience in the research and evaluation cycles of this project.

IV. FLS RESEARCH AND EVALUATION

This part of the report describes the research and evaluation of the Flexible Learning System and several issues and problems associated with it. It does not present research and evaluation results, as these are contained in reports included or referenced in the appendix on materials related to this section.

There are three parts to this section. The first part, Identifying Early Childhood Teaching Competencies, is devoted to an issue which was not solely one of research and evaluation for the FLS. The task of identifying basic FLS teaching competencies preceded the development of competency units, and all of the research and evaluation activities. It required the orchestration of components of the program such as educational philosophy, staff, and financial resources. Its resolution influenced to a great extent the type of research and evaluation carried out by the program.

The second part, The FLS Research and Evaluation Methodology, describes the evaluation system and changes made in it during the life of the program. It describes the various methods the FLS program used to examine learner performance in the classroom, and problems attendant to this activity. These include the limited staff support available, problems in the instrument development and revision cycle, and inadequacies in the FLS evaluation methodology at different times in the program's life.

The third part, Defining Teaching Competencies, discusses an issue that plagues the fields of teacher education and research on teaching: the defining and operationalizing of behavioral competencies. A discussion of how this issue was addressed in the research activities of the FLS is included.

The final part, Integrating Research, Development, and Evaluation, briefly describes an alternative process which, in retrospect, may have better utilized the resources of the FLS and contributed to the establishment of a research base on early childhood teaching competencies.

I. Identifying Early Childhood Teaching Competencies

A primary issue underlying program development involved the creation of competency units on relatively discrete facets of early childhood teaching, which at the same time shared a common approach to teaching. The task was that each of the competency units needed to be independent enough so that users could identify and select those most appropriate for their needs. On the other hand, for the training system to promote the underlying educational philosophy of the education approach, the units also needed to be complementary, reinforcing one another in ideology and behavioral outcomes.

In some ways, this issue faces anyone trying to convey a body of knowledge to others. In the case of a textbook or novel, for example, the chapters must be linear or sequential, and must flow together for the reader, yet present separate topics around which information or events can be organized. For the FLS program, however, the task was much more complex. Each unit was to be a part of a whole as elements in a system of training units. At the same time, each unit also needed to be able to stand alone, containing a particular subject matter, complete with conceptual knowledge and behavioral activities, with a beginning and an end; a workable took in diverse teaching situations. Thus, the effectiveness of the FLS depended to a large degree on selecting an ideal point on a continuum from one extreme of over-redundancy to the other extreme of fragmentation in developing individual units.

Three tools were used for selecting the appropriate place on the continuum, each having unique strengths and weaknesses. The first was the Responsive Education Model, This Model provided a conceptual foundation upon which the units could be based. It revolved around postulates of "open" education such as child-centered teaching and "autotelic" or intrinsically motivated learning. The second tool for ensuring continuity among the units was that the staff developers on the FLS were primarily selected from the Responsive Model Follow-Through program. These staff members were persons having considerable abilities as "trainers" of early childhood staff. Moreover, each had interests in specific content and competency areas that could be translated into specific competency units. Thus, the combination of the Responsive Model's approach to teaching with the staff's expertise helped maintain a consistent thread of educational philosophy among diverse subject matter areas.

The third tool consisted of a unit development cycle based on a combination of research and evaluation (see Figure 1). The cycle is a basic development method used by Laboratory programs for devising products based on field input. There are three principal phases embedded in the method: preliminary, main, and operational field test phases. With regard to the FLS, the preliminary field test was intended to provide empirical feedback on a prototype of each unit. The unit developer would work with a small group of learners using a rough outline of the unit. Data would be collected regarding the feasibility of the unit: whether there was a need for it, what its strengths and weaknesses were, possible areas of expansion or deletion, etc. Based on this information. the unit would be revised and a main field test conducted. The test conditions for this phase were intended to allow a more independent field implementation of the unit that the preliminary field test phase. The unit developer would train field personnel on how to deliver the unit to learners, then collect data on learner outcomes related to the specific objectives of the unit.

Following this, the unit would undergo revision and an opertional field test to examine the effects of a unit in a natural setting virtually independent of FLS staff involvement. Based on the results of this operational test phase, the unit would undergo a final revision and then be disseminated.

Figure 1

THE STEPS IN THE RESEARCH AND DEVELOPMENT STRATEGY

A. Develop preliminary outline of product

1. Review literature.
2. Prepare outline of product including statement of specific objectives or behavioral changes to be achieved and a plan of activities to to carried out.

B. Develop preliminary form of product

3. Prepare scripts for audio or visual materials to be included.
4. Record, edit, dub audio or visual materials.
5. Prepare written materials including evaluation and feedback forms.

C. Conduct preliminary field test

6. Conduct preliminary test in 1 to 3 sites, using 4 to 12 subjects.
7. Evaluate results of field test.

D. Produce main product revision

8. Revise audio or visual materials.
9. Record, edit, dub revised audio or visual materials.
10. Revise written materials.
11. Prepare after-training follow-up materials if to be included in product.

E. Conduct main field test

12. Conduct field test using sample of 30-75 subjects.
13. Collect pre-training and post-training records of subjects' performance.
14. Collect delayed post-training data if to be obtained.
15. Evaluate main field test results to determine if product meets the specific behavioral criteria established.

F. Produce operational product revision

16. Revise materials for operational test.
17. Prepare complete implementation package including all materials needed to use the product without help from Laboratory personnel.

G. Conduct operational field test

18. Train operational test coordinators, if necessary.
19. Conduct operational test.
20. Evaluate operational field test results.

H. Product final product revision

21. Make final revisions in the product.

I. Prepare final reports

22. Prepare and distribute research report giving results of all field testing.

J. Dissemination and implementation

23. Distribute product for general use.
24. Implement product in schools, universities, colleges.

According to the original conceptualization of the FLS project, the research and development cycle outlined in Figure 1 was to be further supplemented by the testing of competency unit clusters. This was to begin in 1974, after 16 competency units had presumably been completed. The developers would test groups of related competencies by working with preschool teaching assistants taking different sequences of comptency units. This would allow identification of clusters of competencies in terms of their effects on a general dimension of the Responsive Model such as classroom control or the child's self-concept.

The linear combination of the field test cycle and the research on competency clusters was seen as the solution to the question of how to design and evaluate individual competency units, and to also examine the overlap of competency units and how they reinforced one another. Moreover, the research and testing on clusters was intended to identify other areas where competency units needed to be developed.

Conceptually, this three-pronged approach to competency unit definition and development was a powerful one. In practice, however, it faltered. The FLS staff had not yet actually produced competency units, and thus had no fixed approach to the content and form the units should have. This non-standardization benefited the FLS in that it allowed each unit author to develop a style and content emphasis most appropriate for him/her, but it threatened the consistency of the System. The result was an array of competency units varying in style, length, and content emphasis (emphasis on academic subject matter content versus experiential, activity-based content). This problem was relatively minor at first, but as new staff were added it became more acute. These newer developers were selected because they provided a needed expertise in a particular subject area (e.g., concept formation, classroom management, etc.). However, they lacked the understanding and knowledge of the Responsive Model possessed by the original staff members. Acquiring this intimacy was difficult. The Responsive Model was, and is, a dynamic approach to teaching and learning; there was no substantive transcription of it during most of the life of the FLS. It existed primarily in the minds, and through the behavior, of the personnel involved in it. Written fragments could be found, but the "gestalt" of the approach was embedded in an evolutionary process.

In a sense, the original FLS staff resembled a group of highly skilled fishermen who had plied the same ocean together and understood it well. However, when they tried to build a fishing net together, they produced a fabric woven of materials having different textures, strengths, and shapes. As new fishermen were added, the net became even more diverse and odd shaped; in places, the connecting threads were almost lost. There was too little transfer of the "basic materials" to be combined with those each new staff person brought to the group's effort. Indeed, some of the units developed later in the program conveyed little of the unifying educational approach which permeated the earlier units.

This "net" of competency units comprising the Flexible Learning System thus turned out to be rather loosely connected, in spite of a specified set of product development criteria. Each unit was to contain (a) a clear statement of objectives, (b) materials and procedures necessary to achieve the objectives of the unit, (c) an estimate of the time required for an interested adult to acquire the competency, and (d) a definition of the level of competence achieved at the conclusion of the training as determined by observable kinds of behavior.

Perhaps there is no method for ensuring that a common set of ideas and assumptions pervade a set of discrete units, if they are each authored by separate individuals. It has been this writer's experience that one cannot convey to others the FLS approach to teacher education simply by having experience in early education or product development. After working as a FLS evaluator for over two years, I began to serve as an FLS trainer. Only after a year in this capacity did I begin to understand some of the underlying educational concepts involved in the FLS. Unfortunately, several unit developers did not have the same luxury of training experience. At the same time, there were also some developers who were familiar with the Responsive philosophy but who were not able to translate their understanding into the form of usable training units. This suggests a situation that staff for this type of development effort need both a common underlying philosophy and the ability to translate it into a written organized set of materials.

II. The FLS Research and Evaluation Methodology

The FLS field test-development cycle combined research and evaluation in the product development process so that modifications and fine tuning of the units could be undertaken in a systematic fashion. Standardized development procedures were designed to produce competency units with similar formats, facilitating measurement of competencies both pre- and posttraining.

The goals of the evaluation component went far beyond the mere facilitation of unit production. The FLS had as a basic objective the enhancement of teaching through classroom experience, rather than academic coursework. The FLS evaluation methodology was to play a central role in realizing this; in addition to evaluating the program, the evaluation methodology would provide a method for: (a) determining what skills learners had at the outset of training, (b) carefully defining competencies so that the learner could choose those competencies that would be most beneficial, (c) specifying the desirable level of mastery, at which the competencies would be assessed (contingent on the role of the person interested in acquiring the comptency), and (d) awarding academic credit for a defined competency at the outset or following training. This perspective on evaluation was an attempt to maximize the investment in evaluation by making it a product, as well as a formative and summative assessment system.

Initially, the assessment system consisted of two components. One was a general assessment instrument, an FLS unit for use by crediting agents (e.g., college professors), the evaluation of the effectiveness of the FLS in delivering competencies. This instrument was to be designed to assess several major dimensions of the Responsive Model within the classroom. The second compoennt of the assessment system was to contain six competency units which provided for indepth self-assessment by the learners in various areas of concern such as self-concept, problem-solving, and the physical environment. A training component for the assessor was to be based on these six, plus additional training materials. Each of the units was to be developed by a FLS staff member with interest and expertise in the area of concern. It was also planned that an evaluation specialist would work with development teams in evaluating individual units and clusters of units.

The instruments would consist of classroom observation schedules, paper-pencil exams, and personal interviews. These techniques would allow diagnosis of needs and specific competencies of a learner at the time of his entry into the training system. This would be supplemented by a Q-sort technique which would allow the trainee to order his/her needs and priorities for training. Learner competencies were to be tested at four levels: (1) The knowledge of something as expressed in verbal or written test of the ability to identify a behavior when observing in a classroom or viewing a videotape, (2) The ability to produce the behavior, (3) The ability to product the behavior and generalize from one behavior to another, and (4) The ability to produce the behavior, generalize from it, and teach the behavior to someone else. Each of these levels was geared to the particular educational role of the person being tested. For example, levels 1 and 2 were considered appropriate for assessing a classroom teaching assistant. A teacher, on the other hand, should be competent at level 3 as well as 1 and 2; while a program advisor or supervisor should achieve all four levels of competency.

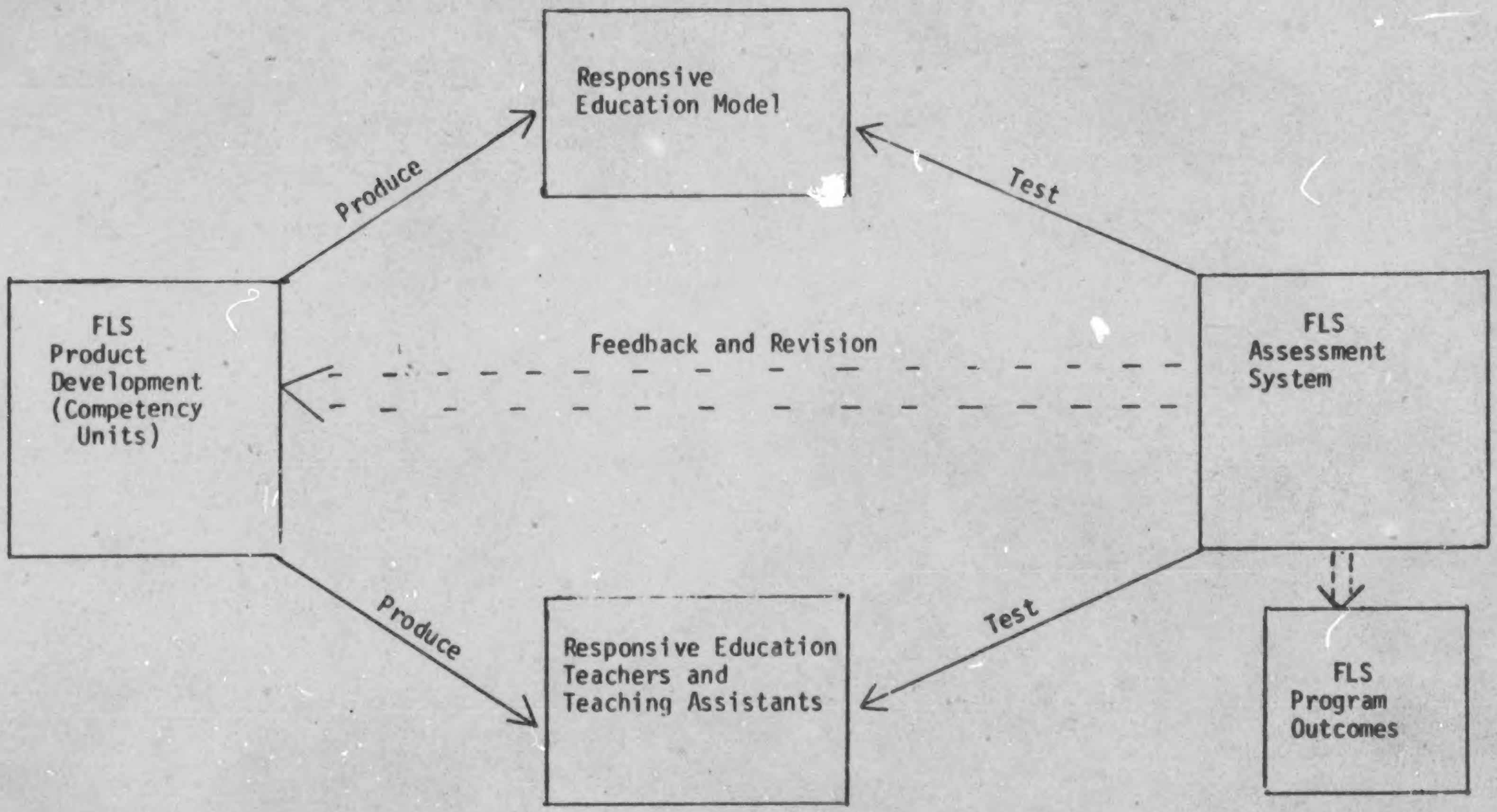
The combination of the instruments presented a potential solution to many of the pragmatic and conceptual problems facing the FLS staff: (a) it provided a mechanism which would facilitate a match between individual learners and the selection of units for their own training program, (b) it allowed program advisors to monitor such training and prescribe changes in training when necessary, (c) it provided a means to assess the quality of the learner's classroom with regard to principles underlying Responsive Education, (d) it represented a means for basing academic credit on observable classroom behavior, (e) it could identify areas of education where competency units were needed, and (f) it could assess the impact of FLS training on teacher and teaching assistant behavior.

The issue of competency unit definition, discussed in the preceding section, also permeated the assessment system development. Here, however, it was a different problem. The competency units and the assessment system were intended to work in tandem to produce and test Responsive Model programs and classrooms (refer to Figure 2). This was a difficult task, however, because no one on the FLS staff had yet created a competency unit and thus they were unsure about what the form of a competency unit should be. Moreover, the assessment system would measure general dimensions of Responsive Education classrooms; thus there was no one-to-one correspondence between the specific competency units that would be created and the assessment system instruments. In some ways this lack of convergence of the units and the assessment system was beneficial, for it allowed a margin of flexibility, rather than demanding competency units with a narrow range of behaviors, thus limiting their impact. As figure 3 shows, several combinations of competency units could be structured to facilitate teaching performance in the Responsive Model of Education which in turn, could be measured by the various assessment system instruments. Using this approach, however, some competency units would not be directly assessed, and this created a problem. Academic credit could legitimately be issued only to a learner who had completed the entire training system, and that, of course, invovled lengthy training.

The lack in complete correspondence between the competency units and the assessment system created other problems. For example, one dimension to be assessed was the Use of Physical Space and Resources, but no competency unit was originally planned for development in that area. On the other hand, a competency unit was to be developed on developing children's senses and perception, and the assessment system was not designed to contain instruments or items for assessing that area.

In addition, a different developer on the FLS staff was responsible for each of the six indepth instruments and the one general assessment instrument. These staff members had worked with Responsive Model Follow-Through programs, but none had yet attempted to develop a competency unit. From recent interviews with persons involved in the development effort at that time, it appears that there was still a good deal of confusion about what a competency unit should look like and to what degree the assessment system should resemble a competency unit. Moreover, although the staff responsible for developing the instruments were skilled and experienced Responsive Model trainers and program advisors, many of them had had little experience in test construction and knowledge of formal measurement theory. This made it difficult for them to develop assessments that could readily be validated or produce staisfactory reliability coefficients. These problems apparently affected the development of the assessment system to the extent that when the preliminary field test of assessment approach was conducted in March, 1973, only a few of the indepth assessment instruments were in coherent rough draft form. These development problems were compounded by the fact that several additional competency units were also scheduled for completion shortly thereafter. This meant that the staff felt obligated to begin a new cluster of competency units while still working on the assessment system.

Following the preliminary field test of the available indepth assessment instruments, it was found that the instrument was unwieldy and required an inordinate amount of time (i.e., one day per section). It was decided to stop work on this approach and to concentrate on abstracting some section for


Responsive Education Model
Produce
Test
FLS Product Development (Competency Units)
Feedback and Revision
FLS Assessment System
Produce
Test
Responsive Education Teachers and Teaching Assistants
FLS Program Outcomes

Figur[illegible] Conceptual Map of the Relationship Between FLS Research and Development.

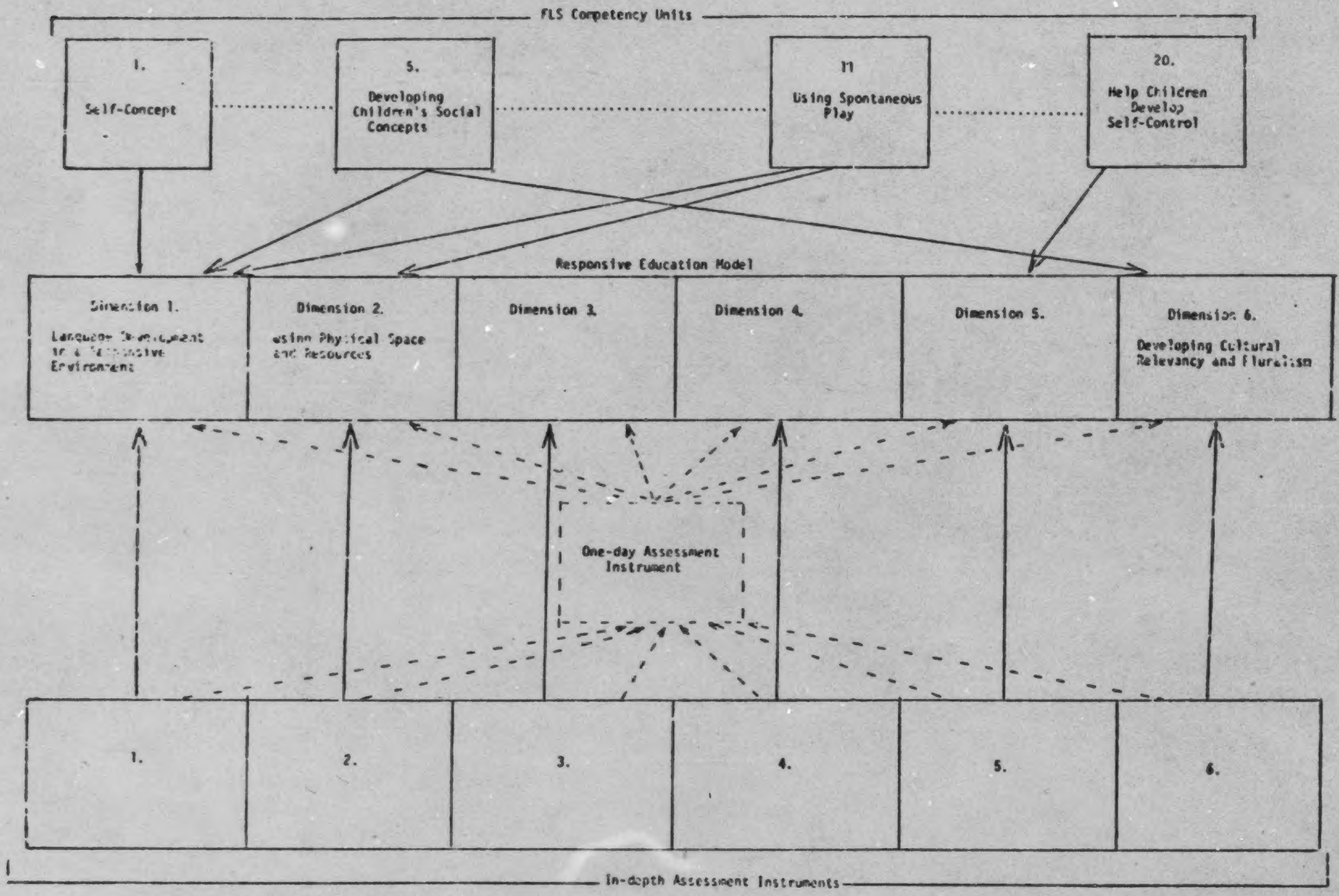

FLS Competency Units
1.
Self-Concept
5.
Developing Children's Social Concepts
11
Using Spontaneous Play
20.
Help Children Develop Self-Control
Responsive Education Model
Dimension 1.
Language Development in a Responsive Environment
Dimension 2.
Using Physical Space and Resources
Dimension 3.
Dimension 4.
Dimension 5.
Dimension 6.
Developing Cultural Relevancy and Pluralism
One-day Assessment Instrument
1.
2.
3.
4.
5.
6.
In-depth Assessment Instruments

Figure 3. Operational Interface Between FLS Competency Units and Responsive Education Model

use in the one-day general assessment instrument. This one-day observational schedule abstracted from the six indepth instruments was intended to be used to: (a) assess clusters of units, (b) award academic credit, and (c) provide a program evaluation methodology. Unfortunately, the lack of correspondence between the general assessment instrument and the individual competency units raises a serious issue regarding the validity of using the instrument as a basis for awarding academic credit based on training in specific units and as a method for evaluating the products which composed the program. The major problem was that both the indepth and the one-day instrument were conceived of as evaluating the installation of the Responsive Education program as defined by the use of a complete set of FLS training units. The FLS, as originally proposed, was to include more than 40 comptency units in its system. Thus, the match between evaluation and training was not designed on the basis of individual units but on the completed set of 40 units.

There was one additional subtle problem, probably profound in its impact on the FLS evaluation effort. Most FLS developer members had a strong commitment to the dynamic, open qualities of the FLS and the Responsive Model approach to teaching; in many ways was viewed as a potential solution to the problems of an oppressive and antiquated public educational system. One of the tools of this educational system was the traditional methodology of standardized evaluation, and its attendant reduction of education to a linear framework of goals, objectives, and outcomes. Staff members who had matured within the Responsive Model feared that the FLS would suffer such a fate; as a result of our evaluation system a quiet, yet strong resistance grew to the development of evaluation procedures and instrumentation. Many staff members reasoned that early childhood teachers and teacher assistants should not have to submit to any sort of assessment--they were involved in teaching for intrinsic reasons (or at least should be), and did not need external standards set for them. This thinking figured prominently in the field test data collection process, resulting in some assessment instruments returning to the Laboratory unsigned, and with incomplete responses.

The problems encountered in the evaluation efforts and changes in program leadership produced a major shift in the emphasis on program and product evaluation, as well as the need to define and measure teaching competencies critical to the FLS. In 1973, the general assessment instrument and three of the six self-assessment instruments were completed, and the remaining resources for the assessment system were redirected toward the production of paper and pencil examinations for individual competency units. From these, a data base would be built which could be used as an indicator of FLS-produced outcomes.

III. Examining Teacher Performance

One of the basic tenets of the FLS program was that teacher performance and competence should be demonstrated where it was to have impact: in a classroom with young children. The general assessment instrument developed as a part of the overall assessment system was intended to measure the classroom performance of FLS learners. It was developed, however, as a method for assessing competencies at a general level, on a limited set of dimensions of the Responsive Model approach to teaching: its basic utility lay in its ability to assess the presence of the general philosophy of the Responsive Model across several teaching situations within a classroom. Moreover, it was a one-day assessment process, fairly easy to understand and apply, and thus valuable to a program supervisor or director responsible for determining staff competency. It did not, however, look at specific competencies generated by individual FLS units, and thus did not effectively serve as a product evaluation tool. Recognition of this fact prompted the development of unit-specific paper-pencil exams that would measure knowledge gained from studying a particular unit. These paper-pencil tests provided a relatively simple, cost-effective method for determining learner gains in knowledge and understanding; but, of course, did not capture what changes in FLS learner behavior were occurring in the classroom.

The paper-pencil exam approach to investigating learner performance, besides lacking the capacity to examine classroom behavior, had a number of other pragmatic problems. Since the production of the exams started well after the development of several FLS units, the instrument development effort became a task of "putting out fires"--that is, hasty development of exams for those units about to or already undergoing field tests became a modus operandi. Unfortunately, there was little or no time for instrument pilot testing and revision before field testing. Most of the exams had satisfactory reliability coefficients, but suffered from a lack of a sufficient number of items for adequately assessing the knowledge of learners on the range of competencies embedded within each unit.

In addition, there was another problem related to the selection of field test sites. Because there was no money allocated for participants, the sites were typically volunteer organizations (Follow-Through programs, two-year colleges, universities, etc.) that received complimentary copies of the competency units they field tested. This meant that we could only work in situations where the scheduling of training courses matched our testing needs. Further, the tuition-free community colleges had an extremely high attrition rate. There was a geographical spread among the sites ranging from Owensboro, Kentucky to Honolulu, Hawaii. This made the monitoring of data collection procedures at each site extremely difficult. There were, in most cases, enough learners for the main field test of the units (x = 30), but documentation was often incomplete because of the reasons described earlier. Moreover, there was no assurance that the paper-pencil exams had been administered under conditions conducive to evaluation of the "true" performance of learners. In many cases, the developer of a unit was responsible for making arrangements for its field test. Many times this obligation was on top of an already heavy workload; and the developer might be more interested in qualitative feedback for unit revision than quantitative data to determine unit impact. This lack of concern for collecting "hard" data was reinforced by the commitment mentioned earlier of most FLS unit developers to alternative education which did not encompass evaluation as a highly valued process.

These concerns and problems inherent in the original conceptualization of the evaluation for the FLS project prompted a fairly radical change in the FLS program's activities in 1974. A basic commitment was made to conducting research and evaluation which would examine the effects of training with FLS competency units on learner's classroom performance. Unfortunately, the resources for carrying out this commitment were not extensive. Nonetheless, a research design was established which involved multiple observations of a sample of preschool teacher (n = 32). The observations occurred twice before and twice after six weeks of training. Either teachers were randomly assigned in equal numbers to one of three training groups (i.e., three different FLS units) or a control group (e.g., no training received). Though the sample was small, as was the number of FLS units investigated, the study was a well-controlled examination of teacher behavior on unit-specific competencies. The results of the research provided valuable information regarding the ability of the three units to impart competencies to learners, as well as data on variables conducive to competency acquisition (e.g., instructional environment, trainer background and experience, learner's educational background). Detailed results of this study were reported in the Final Report on Evaluation and Research of the Flexible Learning System: An Early Childhood Teacher Education Program (referenced in Appendix D).

IV. Defining Teaching Competencies

A basic issue underlying the entire developmental life of the FLS program and its evaluation has been the defining and operationalizing of early childhood teaching competencies. What is competent teaching? How should one measure it? What is the interface of teaching behavior with educational philosophy and values? As Hertzberg (1976) points out:

> "A central issue of CBTE is the source from which teacher competencies (usually defined as 'knowledge, skills, behaviors' and sometimes 'attitudes') are to be derived. This is the rock--or quicksand--upon which CBTE is based. CBTE proponents argue that specific teacher competencies can and should result in specific pupil outcomes, both short and long-term. Buth they also freely admit that the evidence to support this argument is weak and limited to a few teacher behaviors, usually demonstrated under highly specialized conditions.
>
> While CBTE advocates deplore the lack of this evidence, they often express the hope or conviction that it will shortly be forthcoming or will be developed as CBTE programs are implemented. Meantime, some basis other than pupil outcomes must be found for determining the competencies. As one would expect, these efforts typically concentrate on the teacher: conceptualizations of the professional role of the teacher; analyses of what teachers actually do or should do under conditions of practice; desirable teacher traits, attitudes or characteristics; or a combination of all three. However, with a few trivial exceptions none of these can be shown to produce specific changes in pupil learning."

The FLS faced a true dilemma at this state. What guidelines were to be used in defining and measuring specific competencies? The research study described earlier was not funded to examine the relationship of teacher behavior to student outcomes. Yet, the identification and measurement of competencies was essential to (1) how well the learner could identify what competencies he/she did or did not possess before training, (2) the confidence with which an institution could award academic credit for competency acquisition, (3) the parameters of each competency unit's subject matter, (4) and the effectiveness of the evaluation of program and product impact.

Based on the previous experience of the Follow-Through program as reported by Stallings (1975), and after a great deal of staff discussion and thought, it was decided that assessing demonstrable teaching competencies was an important and valid effort even if student (or child) outcomes could not be measured. In essence, teaching is an activity which provides different forms of educational experience for the child and it has been found that the provisioning of these experiences as measured by their level of implementation in the Follow-Through classroom is correlated with child scores on achievement measures (e.g., the degree of program implementation correlated .50 with student achievement on arithmetic scores scores on the Metropolitan Achievement Test). Perhaps educational researchers overtax themselves by attempting to directly relate student outcomes to teaching behavior, when there is such a multitude of intervening variables which influence the causal chain. It is perhaps enough to realize that man's attempt to educate himself is similar to his attempts to explore the universe, i.e., he would not have walked on the moon had he depended solely on his knowledge of cause and effect; he also had to have the aspiration to explore the unknown. Educators also must explore without the benefit of empirical cause and effect knowledge; learning is a dynamic process that influences, and is influenced by, most of what it produces

Operationalizing competency definitions that would reflect the specific content of a competency unit as well as Responsive Model values was achieved by specifying the conceptual organization of the FLS and its relationship with various early childhood teaching domains and teaching competencies. The resulting hierarchical model is presented in figure 4.

At the top of the hierarchy are the three Cluster Domains (Level I). These represented broad teaching goals and values within the FLS approach to early childhood teaching. Within each domain a set of competency modules with more or less similar teaching goals and objectives was identified (Level II). Each module represented a particular early childhood content area. Beneath each module a set of explicit learning objectives was formulated (Level III). These objectives served to focus the trainee's attention to the scope of a module. They are usually interrelated and sequential, as they reflect the learning process embedded in the module. In order to achieve them, trainees must possess or acquire several composite teaching competencies (Level IV), which are composed of combinations of interrelated teaching tehaviors which are representative behavioral outcomes (Level V). Thus, the FLS competencies are considered to be composites of a set of specific teaching skills (Level IV) necessary for mastering FLS goals and objectives which, in turn, related to FLS educational values. For example, three teaching skills were defined for the unit Physical Arrangement of the Classroom: (a) balance, (b) quality, and (c) integration. For example, in order for a teacher to create a classroom area of quality, she/he must be able to plan learning activities for children, conceptualize spatial arrangement of areas, secure activity-related materials, provide space for child-initiated activities, etc. Thus, the conceptual hierarchy of the FLS suggests the relationship of the specific operational measures of competencies assessed in the research study to the broad goals of the system as a whole.

Establishing such a hierarchy was helpful in identifying levels of competency assessment which achieve an appropriate balance between abstract

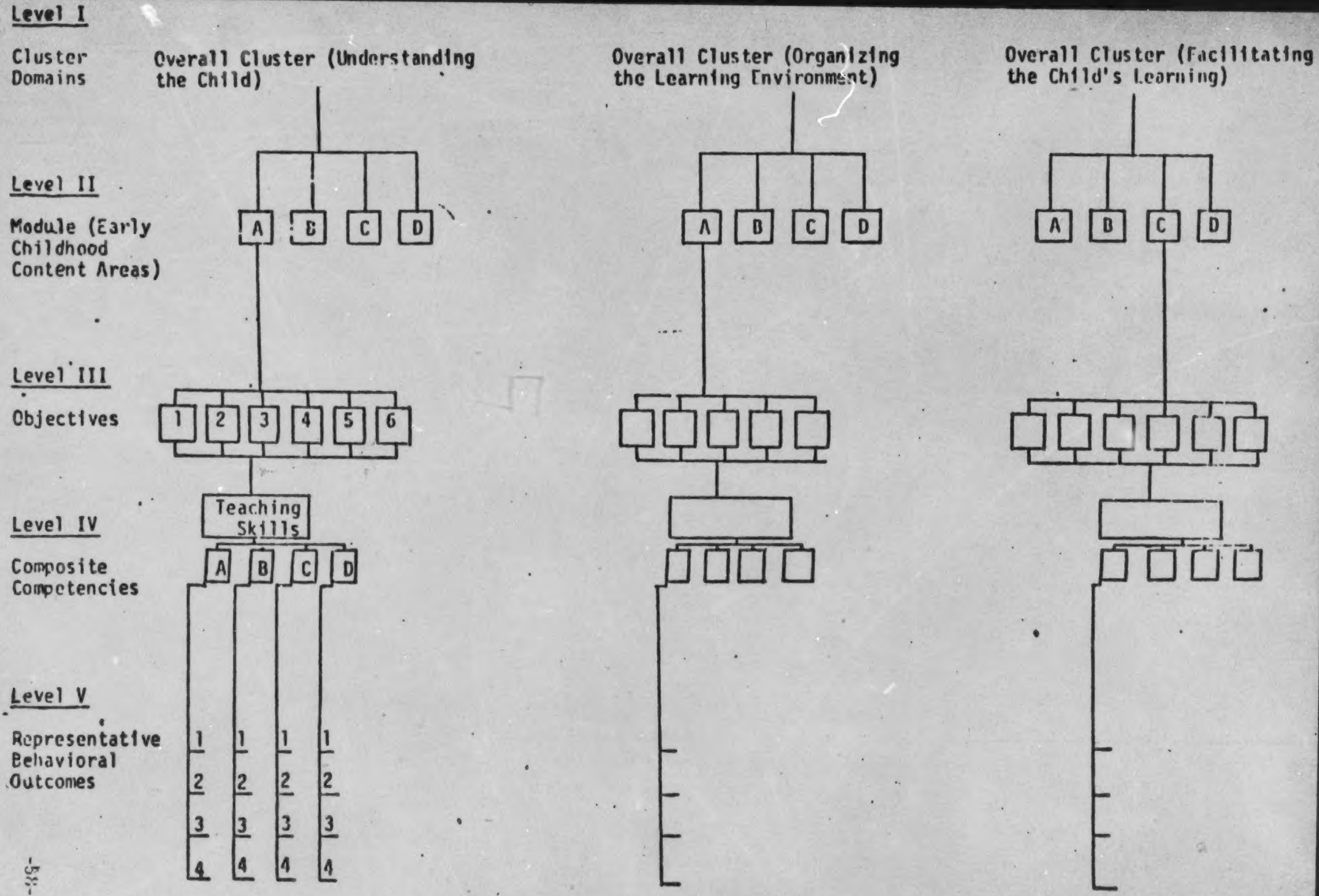

Level I
Cluster Domains
Overall Cluster (Understanding the Child)
Overall Cluster (Organizing the Learning Environment)
Overall Cluster (Facilitating the Child's Learning)
Level II
Module (Early Childhood Content Areas)
A
B
C
D
A
B
C
D
A
B
C
D
Level III
Objectives
1
2
3
4
5
6
Level IV
Composite Competencies
Teaching Skills
A
B
C
D
Level V
Representative Behavioral Outcomes
1
2
3
4
1
2
3
4
1
2
3
4
1
2
3
4

Figure 2 A conceptual hierarchy of the Flexible Learning System

teaching values and micro-teaching behaviors. If the competencies reflect only broad teaching goals or values, they are usually too vaque to accurately define a particular teaching skill and reliably observing them can be nearly impossible; on the other hand, if competencies are overdefined, the essence or art of skilled teaching becomes fragmented into innumerable bits of behavior difficult to translate into competencies.

V. Conclusion: Integrating Research, Development, and Evaluation

The development of the FLS occurred in three relatively distinct yet overlapping pahses: product development, evaluation, and research.

Though the production of units was a continual process with different units being initiated throughout the program's life, initiation of a unit always preceded evaluation, and formal research was not conducted until 1974, over two years after the development of the first unit was begun.

This sequence was a natural outcome of both the conceptual and pragmatic aspects of the beginning of the program. Conceptually, the FLS was an alternative education program based on experience, rather than on data from research on early childhood teaching effectiveness. Pragmatically, the staff of the new program were not trained as researchers but as trainers of early childhood staff. The task was to capitalize on their experiences and transfer them to words which could be shared with other early childhood educators.

The difficulty of defining competencies, development of staff discomfort with research and evaluation, and the lack of appropriate research on early childhood teaching sporadically plagued the program throughout its existence. An alternative process would have been to conduct research on teaching for two to three years before beginning unit development, then follow developmental efforts with formative and summative evaluation activites. This would have initiated the formulation of specific teaching competencies of enormous benefit to the entire field of early education. Moreover, had research reflected dynamic teacher learning as advocated by the FLS, the staff might have used it (and evaluation) much more effecitvely in unit production. In other words, the original FLS development staff had reservations about applying research and evaluation to FLS program development, largely due to the (generally valid) view that they are static activities that produce still pictures of the FLS learning process, rather than reflect the open-ended creative teaching style the program was intended to produce. The 1974 research study depended upon defining competencies as discrete sets of behaviors which learners converge upon. The educational impact of the FLS, however, relies upon teaching learners how to diverge, to develop their personal potential as teachers rather than learning a specific set of behaviors. To research this divergence would require more continuous monitoring of the entire FLS process and outcomes, perhaps using anthropological data collection methods such as case studies, learner diaries, etc. The FLS staff then may have supported this type of research (and subsequently, evaluation) effort and used it as a tool for unit development. At the same time, some experimental controls might have been instituted for generalizations to be made regarding early childhood teaching competencies. This would have been especially effective if the original program conceptualization and funding allocations had permitted employing of more personnel trained in research methodology and data analysis early in the life of the project.

V. FLS IMPLEMENTATION AND DISSEMINATION

The Flexible Learning System is a vehicle by which adults working in early childhood education can develop patterns of thought and action which are useful in their work with young children. Its method has the heuristic quality of setting up conditions within which learners can invent their own learning. Since the principal impact of the FLS derives from actual practical experience with its use, our approach to dissemination has been to educate trainers by having them work with the FLS materials. The rationale for selecting trainers as the primary population for our dissemination effort was to get the materials used by people already working with adults in early childhood education. Furthermore, as described in the previous section, our earlier field testing had demonstrated the critical importance of the trainer's role in effectively implementing the Flexible Learning System.

This report is organized in three section: Workshops, Outcomes, and Lessons Learned. The Outcomes section includes an analysis of the extent of implementation and outreach achieved, and a descriptive summary of the FLS-related activities of the four funded dissemination outlets.

A. WORKSHOPS

Three trainer workshops were conducted at the Far West Laboratory in San Francisco in 1976 (see figure 1). A total of sixty-one trainers participated in one or more workshops. Among them were representatives of four organizations which were designated as National Sites (see later section for description). These organizations were provided with funds to participate in two of the workshops and in return were obligated to conduct outreach activities in their own geographical area. Most of the participants at the workshops had shown some interest or had some experience in using the FLS materials. Some of them were new to the FLS program but had been recommended by others who were familiar with it.

Figure 1

1976 FLS Dissemination Workshops

	Dates	Geo. Origin of Partic.	# of Partic.	Topics
Workshop I	March 8-12	Local	22	·Intro. to ECE ·Class. Arrange. ·Integ. Lang. Exper. ·Self-Concept ·Liter. Exper.
Workshop II	April 5-9	National	15	Same as I
Workshop III	July 26-30	Local and National	L: 12 N: 17	·Cognition ·Cul. Pluralism ·Class. Activities

In general, the workshops were designed to provide trainers with a three-level awareness of the FLS. That is, each participant had the opportunity to do the following: (1) to learn about and use a single unit intensively, (2) to develop access to a small number of other units, and (3) to develop a sense of the system as a whole.

The plan for reaching the first level, i.e., intensive knowledge of a single unit, was based on the experiences of developers who had trained local trainers for the field tests. The trainers had reported that the personal understanding acquired from actual participation in FLS unit activities was a critical element in their preparation for teaching the unit. For the first two workshops, each FLS staff member took responsibility for working through a single unit with a Core Group of workshop participants.

Our plan for reaching the other two levels, i.e., access to a small group of competency units and sense of the system, involved a number of issues such as: identifying a subset of five units which would provide some representation of the system as a whole; stimulating interaction between people studying the same unit and between groups of people studying different units; making best use of our five-person staff as a resource; and enabling trainers to have sufficient experience with one unit so that they would be able to implement it while concurrently enabling trainers to acquire awareness of the resources available in other units.

These plans as embedded in the design of this year's workshops were to undergo a number of changes as we worked at sharing the FLS with trainers. The conceptualization of each workshop emerged slowly and tentative overviews were modified again and again as we came up with ideas for other "bits" or "pieces" that we wanted to include.

The first task was that of identifying the objectives of the workshops. These objectives were in contrast to our previous experience in training trainers for field testing activities. The objective of field testing had been to evaluate the effectiveness of the materials and assessment instruments had been designed to test the students' knowledge of the content of the units. Thus, it was important for the field test that the units be used exactly as written, and each trainer was trained to a comprehensive mastery of the entire unit under study. Individual developers had trained local trainers on how to use a unit during a one or two day training session. Developers used much of the same approach with trainers that they wanted the trainers to use with their own students. Thus, activities were tried out, questions were discussed, and potential problems were identified.

However, the field test activities were now completed and it was no longer necessary to test the effectiveness of each unit individually, because the main objective of the dissemination effort was to provide access to the complete FLS. This meant that the purpose of the first workshop was to provide the Laboratory staff with formative feedback as to the effectiveness of our training program. The purpose of the second workshop was to provide training to National Site trainers so that they could implement and disseminate the FLS program. The purpose of the third workshop was to finish the training on the entire FLS so that participants might develop strategies for using all the resources of the FLS within their own programs.

Workshop I

The first workshop was conducted during the week of March 8-12, 1976. Twenty-two teacher educators from the San Francisco Bay Area came to the Far West Laboratory each day from 9:00 a.m. to 4:00 p.m. Lunches were provided. The format used was to have participants select one out of four units to study. The unit was the basis of a core group.

The five-day agenda for the first workshops included daily meetings during which each core group studied a competency unit and worked through the unit activities. In addition, there were total group sessions during which each core group presented its FLS unit in several different ways. The core groups were directed to take on a new focus of activity each day such as: definition of unit content; identificaton of unit objectives and methods; identification of training problems; planning for implementation; and evaluation of workshop experience. The requirement that each core group share their experience via a presentation to the total group seemed to have a critical positive impact on the workshop, both in terms of rapport within core groups and in terms of their gaining the perspective of teaching as well as learning.

The local workshop provided us with formative feedback on the effectiveness of our training in a variety of ways: it was the first time that the total FLS staff had worked together as a training team; it was the first time we had planned activities which would cover more than one unit; and it was the first time that we would try an approach to involving participants in constructing their own learning. The first workshop gave us sound practice on working together as a team. We learned when and how to rely on one another and developed strategies for sharing our experiences so as to facilitate revisions of the agenda in planning subsequent days' activities.

Workshop II

The second workshop was conducted during the week of April 5-9, 1976. Seven of the fifteen participants were teacher educators from the four National Sites. The eight other participants were from California, Washington, Nevada, Utah, and Kentucky and they came at their own expense. In contrast to the twenty-two participants at the first workshop who commuted daily from their homes to the Far West Laboratory, the second workshop was a resident workshop with participants staying at a nearby hotel.

Although the same basic plan was used for the second as for the first workshop, modifications were designed to meet the different nature of these participants and to incorporate the feedback received from the participants at the first workshop. The first day's introductory activities were modified to include a conceptual introduction to the FLS. The agenda for the second and third days was modified to focus on selection of key activities, and adaptation of activities. The final two days were used to focus more intensively on individual site implementation plans and problems.

By the end of the second workshop we found out that the use of the FLS involved more reconstruction to particular site needs than had been foreseen. Although the trainers needed the first day to focus on studying the content of the units, they were ready by the second day to modify and adapt activities and materials to their own needs. On the last day of the workshop, the participants shared their plans for implementation. It was clear that the workshop had given them the opportunity to study and adapt the units to their own needs. This led to the development of a great variety of plans for how they were going to use the FLS. Some trainers were going to implement particular activities into ongoing classes. Others planned to combine more than one unit. Very few planned to use a single competency unit as a lesson guide for a single course. The opportunity to invent and to try out their own modifications of activities at the workshop had affected their plans for implementation in their home sites. We also found that group interaction among the participants was of considerable instructive value to them. By sharing perspectives with one another, they clarified and enriched their own understanding.

In general, the workshop was a microcosm for the participants to draw on in developing their own training programs. Although the staff did not call attention to the workshop itself as a training model, the comments of some participants indicated their awareness that the experience in the workshop could be used as a model of an educational environment.

Our field tests had shown that the individual units were useful as lesson plans. Now we began to see the potential of the total system as a vehicle for guiding the development of teacher education programs. This insight as to the potentialities of the FLS in the field had implications for the design of our final dissemination workshop. For example, the first-level goal of teaching trainers so that they would be able to implement single units had been based on the assumption that the individual units would fit directly into their site training needs. Instead, trainers were deciding that their field-based needs were best met by incorporating parts of a number of units into their ongoing classes.

Workshop III

The third and final dissemination workshop was conducted during the week of July 26-30, 1976. Twelve of the twenty-nine participants were from the San Francisco Bay Area; eight were from the four National Sites; of the remaining nine, three were from other parts of California and six were from other states (Oregon, Utah, Texas, Arkansas, Kentucky, and Pennsylvania). This led us to a new design for Workshop III. The early edition of the FLS unit, Introduction to Early Childhood Education included a two-page description of a "Responsive Environment" for the education of teachers, in which it was suggested that the space available for a workshop could be divided up into learning areas, such as an audio-visual area, a food and refreshment area, a discussion area, etc. As we wanted to make the workshop congruent both with the way we wanted trainers to use the FLS with teachers and with the way we wanted teachers to work with children, we focused our plans on the two ingredients of learning areas and self-directed activities. In addition, a concern arising from our first two workshop experiences that we find a way to continue momentum to the end of the week led to a decision to schedule a Flexible Learning Fair as the culminating event of the workshop. The Learning Fair areas would be the responsibility of the workshop participants, and the momentum of the entire week would be directed toward the Fair as a culminating event.

Another idea that germinated during our planning sessions for the third workshop was how to teach the FLS as a whole. Again, this notion did not spring full blown, but evolved as the solution to several concerns. We wanted the third workshop to be as educational for the participants who had already attended a previous workshop as it would be for the new participants. This meant creating something new or different for the third workshop rather than replicating the previous ones. We also wanted to take on the challenge of teaching the FLS as a system, rather than as individual units. Once we raised the possibility of the workshop covering the full system, there were problems which had to be resolved. Would each of the five Laboratory staff members need to be an expert on all fifteen units? Clearly, there was not enough time for us to accomplish that. We came up with two ways of handling our teaching responsibility as FLS staff. One was to divide up the units among the staff so there would be at least one "expert" on each. Second, the staff role at the workshop would be to facilitate groups of learners, not to teach particular units. Workshop participants would have opportunities to use any staff member as a resource.

The selection of Workshop III participants was not a cut-and-dried, routine process. Although trainers from our National Sites were automatically included, there was the selection of other trainers, such as other experienced FLS trainers that we wanted to invite as well as people who had contacted us and expressed considerable interest in the workshop. We had a large list (almost 80) of trainers who wished to come to this workshop, and we could accommodate only half that number. It took about three tries to put together a final list of participants which would satisfy both our obligations to individuals and our interest in maximizing the likelihood of dynamic group interactions.

The design of the third workshop involved the grouping of participants into topic areas rather than into groups for intensive study of single units. The four topics were: Cognition, Human Interaction, Classroom Activities, and Cultural Pluralism. Participants chose a topic area and then selected one or more FLS units which they wanted to use to relate to their topic area. This design enabled them to gain experience at adapting individual units to other topics. It also provided people within the same topic group with an opportunity to learn how the units selected by other group members could be interrelated under the same topic. During their presentations to the total group, the topic group members had the opportunity to try out teaching what they were learning, as well as to learn about the use of the units for other purposes by other topic groups. For example, participants in the Cognition group presented learning experiences from the FLS unit on Helping Children Develop Healthy Self-Concepts also had the chance to participate in self-concept-related learning experiences from the perspective of the Human Interaction topic group.

B. OUTCOMES

Although funding was not provided for initiating, maintaining, and extending linkages among workshop participants, some networking developed spontaneously. For example, during the workshop, trainers met other participants who shared similar problems and goals and they often continued to keep in touch with one another after the workshop. The result of our dissemination efforts via a training mechanism thus led to the establishment of an initial network of FLS users. This network can be described as the informal linking of individual teacher educators who are using FLS materials and techniques with their students in preservice and inservice teacher education programs.

Geographically, the trainers in the network represent eleven states from Hawaii to New Hampshire. However, most are local trainers; half of the participants in this year's workshops were from the San Francisco Bay Area (31 out of 61 participants). Of these, fifteen were from San Francisco, eleven from the East Bay and five from the Peninsula. Eight were from other parts of California.

The FLS network can also be described along several educational dimensions. Workshop participants ranged in academic background from B.A. to Ph.D. degrees, with the majority holding M.A.'s. The sites at which they work include institutions of higher education, such as community colleges, state colleges and universities; divisions of local school districts, such as child care, preschool, elementary, teacher resource centers; other local organizations such as Head Start neighborhood Child Development Centers; and state and intermediate education agencies. In general, preservice training is offered at the institutions of higher education; and inservice training is offered at the other sites. Individual participants have different responsibilities at their sites--some work autonomously, teaching regular classes; some have administrative responsibilities and some are administrators of teacher trainers.

Following the third workshop, we decided to conduct personal phone interviews with a selected sample of thirty-two participants, using an open-ended interview approach to collecting information on outcomes. We wanted to obtain as much information as possible to collect it in a manner that was compatible with the process used in the training program. This meant that we needed to devise a strategy which would get at the personalized experience of each participant. The resulting telephone interview questions asked about the outcomes of the workshops, and if and how participants were using the FLS. The interview sample was selected to represent the grographic and educational distribution of participants, their levels of past experience with FLS, and future commitments to using the FLS. The sample included ten of the twelve participants from the four National Sites (Washington, California, New Hampshire, and Hawaii) and twenty-two other participants (10 national and 12 local). The twenty-two non-funded participants represented four additional states, and varied in terms of the educational setting in which they worked (see table 2).

Table 2

Educational Settings:
Number of FLS Trainers

FLS Trainer Sample	2-yr. college	4-yr. college	Day Care, Head Start School Dist.	Other Prof. Organization
Funded (n-10)				
California	1			1
Hawaii	3			
New Hampshire		2		2
Washington			1	
Non-funded (n=22)				
Local	3	0	8	1
National	2	2	5	1

The results of the interviews are reported below in two categories. The first category, Extent of Implementation and Outreach, relies on the trainers' responses to five basic questions: (1) How many trainees are you training using FLS materials? (2) How many trainees are you currently training? (3) How many trainees are you planning to train? (4) How many trainees do you plan to train with FLS materials? (5) How many individuals and groups have you told about the FLS? The second section consists of descriptive summaries of the FLS-related activities of the four National Sites.

Extent of Implementation and Outreach

Current and Planned Use. Trainers were asked to estimate the number of students with whom they had used FLS materials since the FLS workshop. The total of these estimates across thirty-two interviewed trainers was 2,377 trainees. The estimates ranged from 5 to 263 for individual trainers.

Although current use provides a good rough approximation of the extent of trainers' implementation, it is important to note that immediate use is not always possible because of other constraints imposed on ongoing classes (e.g., scheduling of courses). For example, when ten trainers were questioned two months after the first workshop, they reported use of the FLS with only 36.7% of their trainees. However, when the same ten trainers were questioned again seven months after the first workshop, they reported current use with 97.9% of their trainees.

Without the time or staff to conduct two follow-up phone interviews after the third workshop, it was decided to estimate future use by asking trainers to estimate the number of students with whom they were planning to continue their use of FLS materials. On the average, the thirty-two trainers were each using the FLS materials with 53.4 trainees and were making plans to use FLS materials with 42 trainees in their classes for the next session.

In the interviews, the participants clearly indicated that the Flexible Learning System had strongly influenced their teaching, and they considered it an important and permanent addition to their teaching repertoires.

In order to examine the extent to which trainers were using the FLS materials in relation to their total teaching opportunities, we asked all thirty-two to estimate the total number of their students. Their responses indicated that, on the average, trainers were using FLS materials with 60% of their trainees.

Trainers gave percentages for planned use that were somewhat less than for current use. This may reflect the decrease in college attendance at some sites.

Effects of Funding and Education Setting. The percentage of total trainees with whom workshop participants were using or planned to use FLS materials are reported in Table 3 for the ten National Site trainers and for twenty-two of the other trainers.

Table 3

Current and Planned Trainees Taught with FLS:
Percent of Total Trainer Population

Location	Current Use	Plan to Use
National Sites (n=10)	73%	61.3%
Other Sites (n=22)	71.1%	53.6%

Funding support to participants did not appear to be related to the extent to which FLS materials were used or were planned to be used with trainees. Both National Site and other participants were using and planning to use the materials with a large proportion of their trainees.

On the other hand, the extent of implementation did vary according to educational setting, or job function. Trainers working in institutions of higher education used FLS materials with a higher number of students and with a higher proportion of their students than did trainers working in other programs (see table 4).

Table 4

Current and Planned Trainees Taught with FLS:
Percent of Total Trainees

Educational Setting	Current Use	Plans to Use
2-year college (n=10)	74.4%	64.7%
4-year college (n=5)	87.3%	57.9%
Day Care, Head Start, Follow-Through (n=13)	57.9%	47.7%
Other (n=4)	64.7%	41.2%

One possible explanation for this finding has to do with the relative autonomy which college instructors have over course content. For example, after the first workshop, participants from one public school setting reported considerable frustration in their initial efforts to implement FLS activities within their program, because they could not get approval from their colleagues who had not attended the workshop. They resolved this dilemma by arranging to have other members of their staff attend the third workshop. This strategy was successful at two levels: (1) they had a larger group of informed colleagues and; (2) they improved their functioning as a team. These outcomes are illustrated by what happened at their site: the entire staff got together after the third workshop and planned and conducted a preservice, retraining program which incorporated the use of FLS materials. As well as suggesting a possible explanation for the problems of implementation faced by trainers not teaching in colleges, this example also has implications for the type of dissemination strategy advisable for school district teacher trainers. That is, where teams of staff members share responsibility for designing training programs, it is important that the entire staff participate in dissemination workshops together.

Outreach to Groups and Individuals. The opposite relationship, as to the effects of funding support and educational setting on implementation, appeared for extent of outreach. That is, workshop funding was related to the extent of outreach, but educational setting was not. National Site or funded trainers (n=10) averaged 22.6 outreach contacts with groups, compared with an average of 15.9 outreach contacts with groups by non-funded trainers (n=22). Similarly, funded trainers averaged a higher number of outreach contacts with individuals ($\overline{X} = 8.4$) than did non-funded trainers ($\overline{X} = 3.3$).

Although this suggests that workshop support for sites who agree to conduct an outreach effort is effective, the fact that non-funded participants who were not obligated to do so did disseminate information about the FLS, indicates that funding per se was not essential to producing outreach. In fact, if the amount of support required for the ten National Site trainers had been used to provide workshop experiences for two or three additional non-funded trainers, the same number of outreach contacts might have been achieved. On the other hand, the effectiveness of any dissemination strategy can not be judged solely on the number of contacts. A more discriminating set of criteria would include the number of new users resulting from these contacts, and the extent to which outreach efforts were continued. Unfortunately, such data were not available for inclusion in this report.

Effects of Repeated Exposure. Thirteen of the trainers in the interview sample had more than one experience with the FLS prior to the interview. It seemed likely that these trainers would be using FLS materials more extensively than trainers who only participated in a single workshop. That is, the trainers with repeated exposure to the FLS should have more complete knowledge of the materials, and because they had returned for an additional workshop, they also had a high level of interest in the FLS. The interview data provided some support for our expectations. On the average, the thirteen trainers with repeated training were using the FLS with over 75% of their students; while nineteen trainers who participated in only one workshop were using the FLS with 65% of their students. Although repeated explosure did make some quantitative difference in extent of use, it is important to note that the difference in proportionate use between single and repeated exposure was less than ten percentage points. These data of themselves would not warrant a conclusion that repeated dissemination efforts are more effective than a single contact. However, there are three other relevant considerations. The first is that the experienced users made a significant contribution to the dynamics of the dissemination workshop by sharing their expertise and on-site training experiences using the FLS with new workshop participants. The second is that there is an assumption that providing trainers with repeated exposure improves the quality of their use of the FLS. Although we have no objective data by which to judge this assumption, several trainers spontaneously commented regarding the positive effects of their own repeated experiences with the FLS on improving the quality of their use of the materials.

The third consideration is that these data are quite tentative and subject to several confounding influences. The nature of previous experience with the FLS was varied, including field test usage, Responsive Model training, and earlier workshop participation. Also, the interview data included participants of different workshops, and thus may reflect variations in the workshops themselves. Although there appear to be benefits to be gained both from increasing the quality and the quantity of training experiences, their relative effects are not differentiable in these data.

FLS-Related Activities of the Funded Dissemination Sites

Preliminary contacts with potential dissemination sites had resulted in fifteen written expressions of interest in participation. From these, four National Sites were selected for their potential to disseminate the FLS. They represented four different state-wide organization structures: a cooperative of local school districts, an informal network of early childhood consultants at the state level, a consortium of community colleges with ECE programs, and a CDA/HSST training program. Key personnel at each site had past experience with the FLS and gave indication of being motivated to use and further extend this mode of training. The four sites were invited to send representatives to the last two workshops at the Laboratory in San Francisco. Transportation and per/diem costs were provided. In addition to using the FLS in their own program, these four sites agreed to develop and conduct an outreach program whereby neighboring institutions, programs, and individuals would be informed of the FLS and what it might offer them.

Washington (CWEC/CWSC)

The Washington Coop (CWEC) ("the Coop") was initially suggested as a National Site by a professor at Central Washington State College (CWSC) who had worked with the FLS at a previous position in Utah. When the final sites were selected the Washington Coop was selected because of its potential for carrying out inservice teacher education with its twenty-two participating school districts throughout the state. All this time the Director of the Coop was named as the dissemination site coordinator. As agreed, trainers were sent to the Laboratory to attend workshops and they returned to their site and began implementing FLS into their ongoing classes. This involved implementation into undergraduate preservice, off-campus inservice, and elementary classroom practices.

Difficulties were encountered in setting up training and outreach activities in Washington. This may be attributed to the administrative relationships built into the Coop. In the other sites, there were informal relations between administrators and trainers, trainers returned from workshops with concrete suggestions as to training and outreach and they were able to implement them almost immediately. There experiences at the workshops led the trainers to an understanding of the FLS in terms of their home site, so they returned with practical suggestions.

In Washington, on the other hand, the trainers sent to the workshops had no decision-making responsibility in the Coop. Their actions within the Coop on behalf of the FLS were not only contingent on the independent formulation of plans by the Director; his actions were contingent upon the directions of the Coop's Board of Directors which met only semi-annually. Thus, the decision-making authority was twice removed from the workshop participants. Once the role of site coordinator was reassigned to one of the workshop participants, a comprehensive plan was completed and implementation was started in less than a month.

The plan included the use of several FLS units and it was summarized in the document on the following pages.

Development of Installation-Outreach Plans for the Flexible Learning System, 1976-78

A. Installation Plans:

1. Provide inservice training of Early Childhood Education staff members for their use on site.
    a. Plan and present three sessions in Fall, 1976, staff meetings to introduce three FLS units.
    b. Provide a focus for choice of training in at least one unit per staff member.
    c. Utilize FLS trainers, the three selected units in certain ECE courses, and the support personnel for workshops specified in the outreach plans.
2. Train additional trainer(s) as resource personnel.
    a. Provide simultaneous training during the inservice sessions for one or two selected CWSC Education Department faculty to subsequently function as trainers of the FLS materials.
3. Incorporate the FLS materials in ECE major and minor classes throughout the Fall, Winter, Spring and Summer offerings. (See attached sheets for course possibilities.)
4. Apply the FLS materials in various laboratory settings by ECE teachers and their students.
5. Refine the ECE parent involvement model using the FLS materials, teachers, parent-coordinator, school associate and parents.

B. Outreach Plans:

1. Provide inservice training of ECE staff members as trainers for subsequent outreach activities, including the 1976 ECE Spring Conference.
2. Implement the CWSC two-year Senior Institution Contract from the State Board for Community College Education with ECE staff members as trainers in workshops. Financial support will be $1500 from Community Colleges and Continuing Education sponsorship. (Refer to contract for details.)
    a. Plan and present a 1976 November workshop for college credit for Yakima Valley College (YVC), Columbia Basin College (CBC in Tricities), and Big Bend Community College (Moses Lake) in parent education and preschool laboratory techniques (40-100 participants).
    b. Plan and present a follow-up workshop in March or April, 1976.

3. Train the trainers, inservice coordinators and the parent educators of the Northwest Rural Opportunities (NRO)Child Care sites to implement the FLS materials in their CDA training with preschool teachers and parent coordinators.

4. Survey and offer training to STATO and Head Start trainers in Washington State for their workshops and classes.

5. Utilize the FLS materials as appropriate through providing consultant services to the teaching staff of the new Selah Preschool Program (Selah, Washington).

6. Survey and offer inservice training to the Educational Service District (ESD) and elementary school district personnel within the state.

   a. Publish in newsletters and Continuing Education course flyers, ESD newsletters, Superintendent of Public Instruction (SPI) monthly newspaper "Your Public Schools."

   b. Provide 1977 Summer workshops in selected topics.

   c. Plan and implement a joint ECE and Home Economics class for teaching child development and parenting skills to secondary school teachers in summer of 1977.

California (CCC-ECE)

The California Consortium of Community Colleges was selected as a National Site because of its potential for state-wide dissemination. Further, several of its member colleges had participated in earlier phases of FLS development. The Consortium was represented at the workshops by the current president as well as two additional community college instructors. In general, the community college instructors who attended FLS workshops were effective at implementing FLS training at their local institutions. The CCC ECE held a one-day workshop at which other instructors were briefly exposed to the FLS.

The CCC ECE Workshop was held at the Far West Laboratory, and the staff of the Flexible Learning System was invited to attend. This provided us with our only opportunity for first-hand observation of the impact of our workshops on participants' subsequent training activities. This particular workshop was limited in purpose to that of informing CCC ECE members about the FLS. One outcome was that copies of sixty FLS units were purchased by the participants. Another outcome was the inclusion of two articles on FLS in the ECE Newsletter.

The trainers indicated that although they had wanted to incorporate an activity-based approach in their workshop for their fellow members of CCC ECE, it had turned out to be a more difficult task than they had anticipated. They knew the importance of personal involvement in activities from their own participation in the FLS workshops; however, they were not satisfied with their own efforts in creating a similar situation for the CCC ECE participants. They concluded that they still needed time and thinking to coordinate and adapt all the elements into their future workshops. For example, they had difficulty in adjusting from a one-week workshop to a one-day workshop; they depended on the effectiveness of a single planner rather than a team of planners; and they only had two days for preparation.

The trainers' dissatisfaction--in spite of their participants' satisfaction--suggests that provision of ongoing follow-up support should be an ingredient of any similar dissemination effort.

New Hampshire

The New Hampshire Board of Education was selected as a National Site because of their longtime involvement with a Follow-Through project using the Responsive Education Model. The FLS National Site Coordinator had the following characteristics: (1) she had worked as a consultant in the State Department of Education for many years; (2) she had a past record of commitment to open education; (3) she had established working relations with key administrators and trainers of early childhood education in the state; and (4) she was eager to adopt the FLS as a way of meeting the demand throughout the state for Responsive Model training. This site did not have an established, institutionalized structure of operation, but could better be described as an informal interest-based network which included representatives of the State Department of Education, the regional, intermediate agencies, and the University of New Hampshire. Responsibility for implementation and outreach was shared by a number of persons with no formal institutional relationships. They shared a common professional relationship with the chairman of Early Childhood Education Department at the University who had no formal relationship to the FLS.

Site outcomes can be outlined at three levels--University, intermediate agency and State Department of Education.

New Hampshire Outcomes

A. University Level Outcomes

1. A 3-day graduate workshop in July at the University of New Hampshire (UNH) used four units with twenty students. Two FLS-site trainers developed a seventeen-page packet of selected FLS activities from the four units. The course was for one credit. Units were: Introduction to Early Childhood Education, Arranging the Classroom, Classroom Management and Play.

2. The use of FLS with five candidates enrolled in the School of Continuing Studies, the University of New Hampshire external degree program. Units included: Literature, Self-Concept, Parents, Language.

3. Plans by Early Childhood Education Department Chairperson to articulate some FLS units into graduate programs, including four video tapes on Piaget. This followed exposure to FLS process by FLS site trainers.

4. Departure in Fall of one site trainer to University of Illinois resulted in use of four FLS units in upper division course at that University. Units were: Play, Introduction to Early Childhood Education, Problem Solving, Parent.

B. Intermediate Agency Level Outcomes (North County Education Services)

1. A workshop was held in August with 10 classroom teachers. Two FLS-site trainers developed a twenty-page booklet of selected FLS activities from six FLS units: Language Usage, Self-Concept, Literature, Classroom Arrangement, Play, Exploring Children's Thinking. The four video tapes for Children's Thinking were used.

2. At an Education Fair on April 2, FLS site trainers used FLS integration concept (From Language Integration unit) and developed a four-page paper used in a discussion with ten participants in Fair. Also trainers had session videotaped for feedback and development of future workshops.

3. Plans by FLS site trainer at North County Education Services to present FLS as a training resource at state-wide conference of New Hampshire Association for Young Children.

4. FLS site trainers given permission to spend 75% time on FLS training.

C. State Department of Education Outcomes

NOTE: Two trainers attended July workshop. Outcomes at this level slowed down by: (1) teachers strike in September and (2) pregnancy leave of site coordinator.

1. Survey has been sent out to 700 administration Training Staff Development teams in the state regarding an inservice program using FLS unit on self-concept.

2. Plans developed by FLS-site coordinator to work with the State Department of Education (2 consultants), North County Education Services (1 trainer), Lebonan Follow Through (1 trainer), Supportive Department of Early Childhood Education Chairperson, and the University of New Hampshire. These plans include the following:

   a. Lebonan Follow Through and State Department of Education has dissemination funding plan to set up two more district sites using FLS.

   b. Sharing training resources with community staff development agencies.

   c. Articulating FLS in the University of New Hampshire early childhood education courses.

   d. Providing periodic state-sponsored workshops using FLS units as appropriate to training needs.

Hawaii (Honolulu Community College)

Honolulu Community College had had several years of interaction with the FLS staff during their participation in our field-testing activities. In addition to the distinction of the length of time with FLS, this site had provided us with the largest and most usable set of test data of the field test sites. The training activities of Honolulu Community College are largely individualized and on site.

C. LESSONS LEARNED

Site Selection. Perhaps the clearest lesson learned in regard to selection of effective dissemination sites is that there is no single reliable criterion. Administrator-trainer relationships did appear to be important; supportive personal relations among users at the same site also seemed to help. However, as described in earlier sections, there were some factors unique to each site which contributed substantially.

As shown in Figure 5, the four National Sites were selected to represent certain characteristics.

Figure 5

Characteristics of Funded Sites

Level of FLS Experience	Dissemination Modes			
	State Dept.	Individualized HSST/CDA	Cons. of Comm. Coll.	Coop. of School Dists.
Likes FLS philosophy	X			
Staff has exper. with FLS related program	X	X		X
Participation in FLS development		X		
Participant in FLS workshops			X	

These characteristics, however, appeard to be less important than the personal commitment of site representatives to an open approach to early childhood education. This attitude seemed to be highly related to their readiness to adopt the FLS approach to teacher education.

Stages of Use

It did not appear to be necessary for sites to follow an implementation-accreditation-outreach sequence. Activity emphasis varied from site to site, in part depending on site needs and also influenced by individual predilections.

User Problems

The two most frequently raised problems during the follow up interviews regarded materials and assistance. Many participants interviewed expressed concern about getting additional copies of the units. Knowing that the project was coming toward the end of its funding, they asked where they, their students, and other interested people would be able to purchase materials after November 30, 1976. They also asked how they would be able to get advice and support for their activities after the project was ended. Finally, they were eager to know what uses were being made of FLS at other sites that might be helpful to their own efforts.

Workshop Design

In general, interview data indicated satisfaction with the workshops. Participants learned from the workshops as well as from the materials. For example, participation in core group activities provided trainers with insight into the values and dynamics of incorporating such work groups in teacher education classes. One participant, a professor of early childhood education working both with undergraduate and graduate students, stated:

> "I came away with a concept of how to use an open-ended yet structured group experience. I have studies group; I have done counseling. I have quite a little bit of background in the techniques that you've used; yet you used them with great skill. I cam away with a greater skill for using it in the workshop."

She went on to say that "I have always felt the need before to get the class into the books I use as references, to get them to focus on theories, and get them into application." However, now as a result of her workshop experiences, she has decided to begin with practice, with observation skills, and to save the theoretical implications for later.

A central principle of the FLS may be described as "congruence." That is, the way in which teachers are taught should be congruent with the way the teacher educator wants them to teach children. Hopefully, the way we have disseminated the FLS and in the way we share the FLS with trainers has been the way we want them to share the FLS with their trainees. The educational philosophy which underlies the FLS has been the major determinant of the form of our dissemination efforts, and the process of this year's activities may be viewed as one metaphor of what the FLS is all about. We anticipate that most teachers will be working with children in groups so that our user guide is designed for working with teachers to use with a group of other teachers, and we have conducted workshops for trainers to come together in groups. As the trainers became more knowledgeable about the process of their own learning in a workshop group, they developed new skills at understanding and working with groups of teachers. Similarly, the teacher's own learning experiences should provide them with new tools for working with children.

The FLS employs several techniques for working with teachers in groups (See "Elements of Training" in appendix). These techniques are exemplified in activities written into the units. For example, activities for personal introduction to the group focus members of the group on the other learners so that they begin to recognize other group members as potential resources. Role-playing activities provide opportunities to try out conceptions in action as well as in reading, writing, and discussion. Other techniques include: looking for examples, generating criteria, sharing and discussing experiences, teacm teaching and presentations by core groups to the total group.

Just as the activities exemplify particular educational strategies, the sequence of events within each unit illustrates various other elements. The rhythm, balance, and general pacing of an educational experience can enhance learning just as well-designed freeways can improve driver performance. That is, just as a highway with curves, hills and interesting scenery provides challenging variation that maintains alert attention, so educational programs can be designed to include elements such as the following: (1) opportunities for individual, small group, and large group activities, (2) alternation of focus on broad generalization to specific experiences, (3) variation from physical activity (e.g., setting up an area, rearranging the furniture, eating lunch, dramatizing a role play) to verbal activity (e.g., planning a core group presentation), (4) leading a large group discussion,(5)reporting on the theme and content of a unit, (6) writing a daily diary, (7) brainstorming goals, problems solutions, etc. All these challenge the learner to consider a topic from a variety of perspectives.

Recognized since Cicero taught mnemonic strategies to Greek students of rhetoric is that the more meaningful the associations of something to be remembered, the more that thing will be accessible for recall. Thus, the FLS workshops model a variety of approaches to the same topic and also encourage participants to share their approaches and experiences with one another (e.g., as individual learners, as pairs of learners in small groups, in large groups, etc.).

Our concern for pacing began with our initial planning of each workshop around the arrival and departure times and the noon meals. This planning took account of the pace with each day of the workshop(e.g., people will want coffee and a chance to say hello in the morning; they will be hungry by midday; they will be more tired after lunch than before lunch, etc.) as well as within the five-day sequence (e.g., people may be shy, assertive, apprehensive on Monday; people will be restless by Wednesday, exhausted by Friday!).

Conclusion

At the core of our approach to dissemination of the Flexible Learning System has been an abiding respect for the individual trainers with whom we have worked. Rather than a "teacher-proof" curriculum, the Flexible Learning System is a "teacher-enhancing" curriculum. Rather than viewing teachers and teacher-educators as potential sources of error in the implementation of a curriculum, the Flexible Learning System views them as embodying the curriculum, and provides conditions, materials, and activities to enrich them.

This is a simple yet profound notion. As the basis of the Flexible Learning System, it was also a major contributor to the considerable success of our training and dissemination efforts.

> "... by working toward defined ends we commit ourselves to the manipulation of persons, and therefore to the negation of democracy.

VI. FLS FUTURE DIRECTIONS

There is an old saying that "as the teacher is taught, so shall s/he teach." This saying applied equally well to the teacher of teachers (i.e., teacher educators or teacher trainers). The findings of the FLS research phase identified the importance of the trainer role in the implementation of the FLS program. This led to our interest in working with trainers to develop the training competencies required for an effective use of the FLS program. Our work this past year with more than 60 early childhood teacher trainers (see appendix for locations) from different parts of the country has confirmed the need for a "teaching the teacher of teachers" program which provides the type of process-oriented approach to teacher education as is offered by the FLS materials.

The reason for this need grows out of a variety of factors related to the preparation of teacher trainers and the institutional support system. That is, many educators in charge of teacher development have obtained much of their own academic preparation in formal situations (e.g., lectures to large audiences). Their studies have often focused primarily on subject matter knowledge with relatively little preparation on the processes underlying the development of interpersonal and interactive social relationships and communication. Yet these same trainers are being asked to instruct and model behaviors for teachers who are or will be working with groups of children in actual classroom situations.

The disparity between teacher preparation and the actual demands of the teaching role is perhaps most acute in early childhood education. Teachers working with very young children have a particular need to obtain pre- and in-service training on process-oriented ways of working and teaching. This need is further accentuated by the current practice of recycling teachers "downward" from the upper grades because of changes in school populations. Many of these latter teachers have a substantial subject matter knowledge base but they need an educational program which emphasizes the process of how to work with young children. They need to have support in moving from the notion of teaching the structure of a subject matter discipline to that of understanding the structure of how a young child develops and the process skills s/he needs to support growth. For example, the teacher in the early childhood classroom is often required to combine knowledge of child development with content knowledge of math, science and language in the context of working productively with the young child's learning in the sand pile corner. The ability to do this well is to a great extent dependent on the opportunity s/he has had to internalize the principles and concepts of the subject matter disciplines, the understanding of the developmental needs of the young child, and the processes which are required to put this knowledge and understanding into practice.

One other aspect of teacher preparation also needs to be addressed. There is increasing evidence of the importance of the parent in the young child's learning. There is also some evidence from the evaluation of the early childhood education programs in California that the development of programs for parent involvement and parent education is still a major problem. This concern is related to the larger issues of how to help teachers to develop and sustain supportive relationships within a particular group of adults who are working with him/her to provide an educational experience for young children.

It is apparent that the basic issues of effective teacher preparation for education in the early grades must include the development of social and interpersonal skills which deal with how to relate and communicate with other people (children and adults). It is also apparent that although the current system of teacher preparation is appropriate for content acquisition, there is still a need to ensure that teacher trainers are able to provide their teachers with process-oriented skills of teaching. It is time to look more closely at the question of the development of teacher educators.

What is the present state of the art for the preparation of teacher trainers? The current ways for the continued development of the teacher-of-teachers focus primarily on the updating of content information, e.g., attending professional conferences, seminars, meetings, and reading new books and journal articles. There is little opportunity to observe modeling of various training behaviors, with the exception of an occasional workshop. Here again, the input is sporadic and often ineffectual, as the modeled behaviors are quite often limited to the particular charismatic personal style of a workshop leader.

In reexamining our work with trainers in the light of the above considerations, we have identified some elements which we feel are critical in the development of an adequate training program for trainers. We have conceptualized these elements into a model for such a training program. The model views the major goal of a training program as that of providing learners with access to resources (i.e., support mechanisms). As shown in Figure 1, our model tentatively identifies four major categories of resources as follows: training materials, modeled behaviors, peers and colleagues, and the educator's own self. The value of some of these resources has already been recognized to the extent that there are projects which provide one or more of these resources. That is, Resource Libraries have been funded for the purpose of collecting and informing teachers about available educational materials. In terms of the modeled behaviors, there are various inservice workshops conducted by consultants who have the capability to model some important teaching behaviors. Still further, there is an increasing interest in networking projects in which groups such as teachers' centers can share experiences and develop a relationship among their peers and colleagues. However, there are almost no programs which systematically plan for the inclusion of all these important resources in such a manner that the whole issue of developing teacher trainers is addressed and provisioned as part of a total effective program.

The model also lists the Stages of Development of various trainers who may participate in the training program, e.g., "survival stage," "consolidation stage," etc. We are indebted to Dr. Lilian Katz for the labeling of the different stages. Although Dr. Katz used these levels for the purpose of describing different degrees of maturity in teachers, we have found them very helpful in our conceptualization of the developmental stages of trainers. It is proposed that there are developmental levels of maturity in trainers, just as in teachers. There is the survival level trainer who is just starting his/her first year or so as a teacher educator. There is the consolidation level trainer who is no longer worried about surviving, but is interested in improving her skills as a trainer. The third level of trainer is at the renewal stage where he/she is interested in finding out what other trainers are doing. The fourth stage of maturity includes the trainer who is pretty independent of the usual kinds of support mechanisms. These categories are useful descriptions, but it is recognized that they are not mutually exclusive. For example, a trainer who is at the maturity level in terms of general competency in the early childhood classroom may need to spend some time at the survival level when he/she is faced with a new program for mainstreaming handicapped children into his/her classroom.

Figure 1

Training Program for Teacher-Developers

Resources X = primary resource
(X) = secondary resource

Stages of Development	Materials	Modelled Behaviors	Peers and Colleagues	Self
Survival	X	(X)		
Consolidation	(X)	X	(X)	
Renewal	(X)	(X)	X	
Mature	(X)	(X)	(X)	X

Figure 1 indicates our conception of the interaction between various trainer levels and the type of resources which the training program needs to provide. Because there are different developmental levels of maturity in staff developers (survival stage, consolidation stage, renewal stage and mature stage) a good trainer development program must provide access to all four categories of support mechanisms or resources which are useful to these various maturity levels. Our preliminary observations in trainer workshops this year suggests that there is somewhat of a progression (i.e., a linear relationship) between the level of maturity of the staff trainer and the type of resource which is primarily used. For example, the beginning or first year trainer at a survival level came to the training workshops and was mostly interested in "new and innovative" training materials. In contrast the more mature trainers, perhaps at the renewal level, appeared to find greatest value in the opportunity to interact with peers and colleagues and to share experiences.

Based on the model outlined in Figure 1, it is proposed that a development program for teacher educators must provide access to different resources and that it should be composed of a combination of training and networking activities which include the following elements:

A. Access to materials: The materials are the media; the message is the underlying process of teaching. It is assumed that some materials facilitate this procedure more effectively than others. Our work with trainers to date suggests that the Flexible Learning System units are one example of the type of material required. The major selection criterion is that the training materials must be flexible enough to provide situations which encourage and provide access to the other three types of resources.

B. Access to modeled behaviors: The program for trainers must provide situations in which they can see modeling of important staff development behaviors (e.g., how to conduct a productive discussion). The modeling may come from the workshop "leader"/facilitator," but much of the modeling should arise from more mature teacher trainers in the group--the program should be structured to provide for this peer modeling. In addition, the program should provide opportunities for learners to practice as well as observe the modeling of training behaviors.

C. Access to peers and colleagues: The development of a trusting, supportive, and communicative relationship with peers and colleagues is another important resource. The workshop program should provide situations which initiate such relationships and which provide an experiential model which can be used by the learner in their own situations. This resource of a network of peers and colleagues is extremely important for many "institution-bound" trainers who wish to make changes in their style of teaching but who feel the need for interacting and sharing with peers in similar situations; for example, participants in our FLS workshops have commented that it feels so great "to be able to 'expose' myself" and to "feel that people in my group understand me and care about what happens to me--not only as a trainer but as a person..."

D. Access to "self" (personal resources): The program should provide situations which will help trainers to become increasingly aware of their own strengths and capabilities. The process of staff development should include many opportunities to share personal insights and experiences, to "take credit" for accomplishments, to obtain positive feedback, to reexamine and compare perceptions with peers and colleagues, to explore one's capabilities in new roles and situations, to analyze, select and construct one's own approach out of materials and behavioral strategies, to develop judgment, etc. The goal of becoming an independent, self-assured learner is as valid for the adult as it is for the child.

Among the resources described above, perhaps the resource of "self is the most unfamiliar. At the same time, we feel it is perhaps the most important and provocative resource of all. The other resources have the problem inherent in the old adage of "You can lead a horse to water, but you can't make him drink." That is, you can provide the best training materials, master teaching models and networking systems but in the last analysis, the use made of these resources is dependent on the sense of ownership on the part of the users. The extent to which the learner takes ownership, not only of a particular set of training materials, but of his/her own learning, is the extent to which a training program is successful.

The development of the resource of "self" was explored in our FLS workshops this year by the use of activities in which many levels of construction and creation were encouraged. For example, instead of the FLS staff "telling all" about each of the FLS units the trainers were given the opportunity to determine their own learning experiences. These included: (1) exploring the FLS units on their own; (2) selecting their major topic of interest (broad issue areas such as "social development in children"); (3) analyzing the FLS units in reference to their topic area; (4) selecting activities and ideas from various units; (5) ordering and constructing their own sequence of activities; (6) planning for the presentation of their ideas; (7) presenting to small core group; (8) revising and participating in the presentation of the core group to the total group; (9) obtaining feedback, sharing ahd planning for eventual use in their own programs, etc.

As described by one FLS staff member, the workshop experience could be viewed from the analogy of the trainers as owners of cars. Each of the trainers has a favorite model of car and brings along this preference as part of his/her experience. The workshop provides them with other models of cars and they can then compare, select and reconstruct their own particular model version. The power of this process is that by having gone through this experience, the car owner realizes that this new model he/she has constructed may be his/her favorite model for this year--it is the latest but not the final model. The trainer is then more interested in finding out about any new or different models because he/she can continue to use the same process to change, revise and reconstruct even more pleasing versions as newer models are introduced on the market.

The issue of "ownership" is important for another reason beyond that of motivating the trainer's own learning. The sense of the trainer's ownership is related to the learning of their trainees. That is, during the planning of this past year's implementation phase, a great deal of thought was given to the concern that the success of FLS as a program was dependent on the extent to which the following matches could be made:

1. The match between FLS and the individual trainer's own philosophy and style of training.
2. The match between FLS and the needs of the trainer population of the trainer.
3. The match between FLS and the program in which the trainer was working.

As the training of trainers progressed, it became clear that the first match is the critical one. If this first match is successful, then the trainers themselves construct and facilitate the other two types of matches. If the trainer internalizes the approach and training process used in the FLS units (and this may be a function of his/her own predispositions to the FLS training style) then the articulation with their own trainees and programs challenges the trainer to adapt a constructive, creative stance.

How successful was the FLS training this year in facilitating the critical first match of FLS-to-trainer? The full effect of this match is still to be seen, but we do have some preliminary indications. For example, a number of trainers have developed, submitted and gained approval for the use of the units in ongoing training courses and programs and one trainer has incorporated almost the entire FLS set of units into a two-year program of training candidates for the national Child Development Associate program (see appendix). In view of the past experience with the relationship of institutionalization to program longevity, this activity of trainers has some important implications regarding the eventual survival of the FLS beyond the period covered by this documentary.

In addition to the institutionalization of FLS products, there is also some evidence that the trainers were able to acquire and implement the processes embedded in the program. It is a common experience that one may be an "A" student in a course, but it is only when one is required to teach that same course that one really learns the content.

In a similar way, the FLS workshops were deliberately designed to explore opportunities for trainers to construct and present what they had learned. One form of this presentation was the participation of three FLS trainers on a panel program at the 1976 National Conference of the National Association for the Education of Young Children. The title of the panel discussion was "Issues of Training Trainers". The paper discussing "Issues of Providing Process in Training Programs" will be found in the Appendix.

The sense of ownership in the FLS program on the part of the FLS staff has led to our developing a number of efforts to continue to extend this approach into meeting a variety of needs in the field of early childhood education. One major direction is in the use of the model training program described earlier to develop a combination training and networking system for a state or region. In the following pages, we describe three types of activities which are based on the italics:

A. *The implementation of the model training program in a region or state;*

B. *The use of the model to investigate changes in trainers and institutions;*

C. *The expansion of the model to focus on the roles of the trainer/developer and the trainer/evaluator.*

An example of a type A activity is described on the next pages.

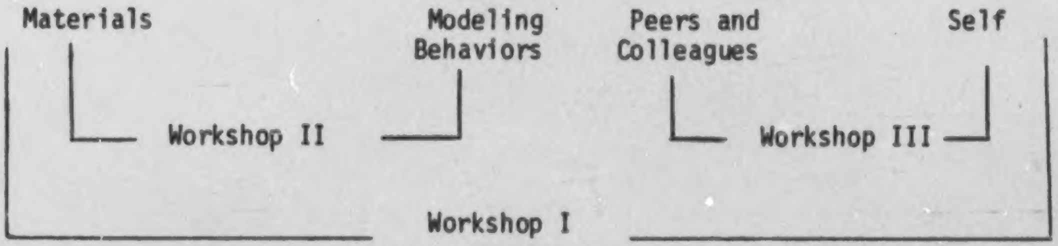
Example of Type A Activity

Networking/Training Effort for Supporting Trainers
(NEST Program for Utah)
Proposed Scope of Work for One Year

Work Unit I. Preparation of Staff Developers

A. Provide three 5-day workshops per site (number of sites to be determined later) for the following purposes: Workshop I (Introduction to the four resource components: staff development materials, modeling behaviors, peers and coleagues and learner's self); Workshop II (Focus on first two components); Workshop III (focus on last two components). A schematic diagram of this procedure is as follows:

Staff Education Program Resources



Workshop I:

To provide an introductory access to resources of the Flexible Learning System, including the modeling of teacher educator behaviors, initiation of peer and colleagial networks and the development of individual capabilities. Content will focus on broad areas such as social development, cultural pluralism, etc. Participants should include administrators as well as teacher educators.

Workshop II:

To provide opportunity to work on participant/site generated issues, using an indepth understanding and knowledge of several units. Issues may focus on adaptations and extensions of specific units for different populations of children and major problems to be addressed, e.g., selection and use of units for "mainstreaming", bilingual education, etc.

Workshop III:

To provide opportunity for participants to work in teams as co-developers, using FLS materials plus other materials available from other sources (e.g., Regional Resource Centers and National Diffusion Network materials). Content will focus on participant selected issues and the outcome will be rough drafts of units on different topics which are needed in a particular area (e.g., revision of units on "Working with Parents" and "Selection of Materials from a Black Perspective" into units on "Working with Shoshone Parents" and "Selection of Materials from a Shoshone Perspective".) In addition to such units, the goal of this workshop will be the development of a training program which is "custom-made" to a particular geographical locality, i.e., "The Utah State Program for Staff Development."

B. The location of each workshop should be related to the task of ensuring the development and maintenance of realistic collegial networks and support systems. For budgeting purposes, it is assumed that the project staff team will travel to the location of each workshop.

C. Schedule for workshops: Workshop I to be conducted during the early part of 1977, Workshop II to be given during the summer months of 1977, and Workshop III to be given during final months of 1977.

D. Optional: Additional workshops for Coordinators are available. If desired, it is possible for the training Coordinators of each region to participate with laboratory staff in the planning of the workshops. This would provide for the continuation of this approach after the project year.

Work Unit II. Networking of Staff Developers

A. Provide access to appropriate materials and information.

1. Collect, reproduce and distribute useful materials.
2. Provide a Lending Library of audio visual materials.
3. Provide information on consultants and specialists (telephone referral service).
4. Provide information on other projects and materials as requested (telephone referral service).
5. Develop some method of information sharing, e.g., chain letters, audiotapes, newsletters, etc. The content will be collected during monthly interviews (either over the phone or on-site).
6. Share materials developed by network participants, such as reading lists, descriptions of adaptations of FLS materials for use in special programs, course descriptions for new or revised courses using FLS units, etc.
7. Share information on activities of participants on FLS implementation and dissemination.

B. Provide on-site technical support to staff educators.

   1. Consult on special local concerns, i.e., adaptation to learner needs, evaluation, etc. The learner population includes all the adults in the E.C.E. program.
   2. Help plan and facilitate local staff development workshops.
   3. Provide information brochures and exhibits for PR purposes (administrators, local community, etc.).
   4. Provide on-site consultant services as required. For budgeting purposes we are assuming three trips per site.
   5. Provide publication services (art, editorial and production) to produce materials generated in workshops.

C. Provide opportunities for formal and informal sharing sessions of staff developers in the network, e.g., at state and regional conferences of various education associations. For example, a group of staff educators in our current program will present a panel discussion on "Issues of Developing Staff Educators" at the national NAEYC meeting, and we will have an informal open-house for all FLS participants.

Work Unit III. Research and Evaluation: Optional

Another future direction is the use of the model program in Type B activity as a means to conduct research on changes in trainers and institutions. This effort will focus on some major research questions. Our preliminary thinking on the assessment issues on such a project is as follows:

Institutional Program Outcomes

The proposed training and research project will need to study the effectiveness of a training/networking approach on producing changes along two dimensions: (1) the change in trainers along the developmental lines indicated, (i.e., survival to maturity) and (2) the change in the institution in which trainers are working. The research on both of these changes requires a substantive research component which is briefly described in the following section.

The proposed program will need to be monitored at two levels: (a) the operational level, and (b) the outcome level.

Operational Level

The proposed program will deliver an instructional process using workshops as the educational method. The success of this approach depends upon the ability of the program staff to produce and deliver workshops which are responsive to the various levels of the participant trainers' development. The degree of match between the services provided through the workshop and the participants' level of development is critical so that they leave the workshop feeling neither overwhelmed nor bored. While the proposed training staff who will be responsible for the workshops have had considerable experience in producing such workshops, they have learned that it is essential that the workshops are continually refined and improved. This formative evaluation must involve assessment of how well the workshop provides resources in the way of materials, modeled behaviors, opportunities for peer contact, and possibilities for realizing one's own potential. These elements can best be assessed through systematic collection of participants' percpetions of the elements in the workshop. For example, it has been our experience that much of this type of information may be collected via having the participant/trainers keep an anecdotal diary of their own "what have I learned" and "what changes have come about" in their own teaching behavior and their institutional support systems.

A second operational phase of the program that will be monitored involves the networking activities designed to facilitate contact and cooperation between trainers at various sites. Again, the emphasis is on formative evaluation intended to refine and improve the program's networking strategies (e.g., local meetings, newsletters, referral services, consultation support, etc.). Based on this input, networking strategies will be modified to maximize interinstitutional communication so that participants are assured of a constant peer support and "cross-fertilization" system.

Outcome Level

This phase of program monitoring is concerned primarily with summative evaluation of program outcomes. Workshops will be assessed in terms of the development of feelings of trust among participants, insight into oneself as a teacher, and acquisition of modeled behaviors. In addition, the institutional impact of the program will be evaluated according to intrainstitutional indices such as degree of implementation of workshop processes at participant sites, changes in courses offered, changes in relationships among site staff, and changes in staff perspectives on teaching style and approach. Interinstitutional elements to be assessed include frequency of contacts among participants at various sites, exchange of ideas and strategies for teaching, and cooperative interinstitutional programs. For example, our current work with trainers in community colleges suggests that an interinstitutional effort is needed for the development of programs which would address the problem of articulation between two and four-year programs.

Example of Type C Activity

The third major direction of FLS effort is in the development of the expansion activities related to the use of the model training program. In particular, the interest of the FLS staff in expanding the "self" resource has evolved into a direction in which the trainers are trained for dual roles such as trainer/developers and trainer/evaluators. This direction emphasizes the perspective of the FLS as an initiating or "starter set" of materials. An example of the first category of developing the role of trainer/developer is a project in which it is proposed that we work with a team of trainers (both early childhood and special education) for mainstreaming programs. This program would again include both Trainer Institutes (for training/development) and networking activities. The following pages describe the topics to be addressed at the first Institute (the topics for the other two Institutes will be found in the appendix) and some possible issues to be incorporated for work with handicapped children. The result of this program would be the development of six new units for training in mainstreaming programs.

Trainer/Developer Institutes

The three one-week workshops for Trainer/Developers will be organized around three major issues: (1) Organizing the Learning Environment for Mainstreaming; (2) Providing Classroom Activities for Mainstreaming; (3) Understanding the Mainstreamed Child. For each of these issues, we have selected some FLS training units to be used as a core set of materials. These core units may be used in various ways to develop the two TOP-M units * which are to be the outcome of each Institute. A single core unit may be extended for use as a TOP-M unit. Again, activities from two or more units may be combined and extended to develop a TOP-M unit. Still further, other training materials and ideas contributed by the participants themselves may be used, either as the main component or in conjunction with the core units.

The varieties of ways in which the core units may be adapted, revised, extended and reconstructed makes it difficult to state which two particular TOP-M units will be the outcome of each workshop. However, in the following sections, we have described each of the core units for the Institute and have offered some extremely tentative suggestions as to how these units might be changed for work with handicapped children.

Trainer Institute I: Organizing the Learning Environment for Mainstreaming

Core Unit A. Arranging the Classroom for Children

> This unit is designed to help early childhood educators achieve an optimal classroom arrangement for a variety of activities and child groupings. It addresses basic principles of interaction between space, materials, classroom activities, and educational goals. It is particularly suited to educators interested in providing an open-education setting where children assume responsibility for their own activities. It can be useful for teachers of older children as well.
>
> Part I introduces six basic classroom areas described by 12 variables covering size, boundaries, materials, working surfacss, and functions. Exploration of the relationship of variables to classroom operations leads learners

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* (Trainer of Programs for Mainstreaming)

to the solution of management problems through classroom arrangement and modification of the six basic areas to suit individual needs.

Part II provides an illustrated and descriptive guide to physical facilities and resources. Topics covered are: storage, working surfaces and seating, the floor, raised work and play platforms, enclosed areas, room and area dividers. References include over 60 publications, films, and additional resource addresses.

This book can be used individually or with fellow learners. Chapters contain a topic introduction, learner-activities, and a follow-up discussion. Learner-activities include classroom observations, simulation, and decision-making problems. Pullout activity forms are provided for recording activity results.

The chapters are integrated to help learners: recognize, describe and evaluate six fundamental types of classroom areas; know how to manipulate area variables to improve the function of the classroom.

Sample Mainstreaming Issues: Space and traffic patterns for wheelchairs; surfaces to be used by children near floor level (i.e., six inches off the fooor); use of tactile clues; use of furniture with stability, etc.

Core Unit B. Analyzing Classroom Situations: Helping Children Develop Healthy Self-Concepts

This unit is for learners who want to develop an understanding of the effects of classroom situations on children's self-concepts. What is a healthy self-concept? How do teaching practices affect children's self-concepts? When are teacher practices demeaning, restricting, over-rating, or enhancing to children's self-concepts? These are the questions addressed in this unit.

One of the points emphasized in this unit is that children's self-concepts develop as they *take credit* for what they do and what they are as individuals, and as they *integrate* the results of new experiences into beliefs about themselves.

The first 60 pages contain guidelines and lesson plans for conducting an eight-session course or series of workshops. These are followed by three readings of approximately 40-pages about the nature of self-concept and its development and examples and discussions of classroom situations.

The learner progresses through the workshop series in a sequence of steps leading to a deeper understanding of the influence of adult behavior on children's self-concepts. Learner activities include identifying positive/negative classroom situations, learning and using specific criteria in an analysis instrument to identify positive and negative elements in teaching situations, applying these to actually observed classes, and formulating and discussing ways to improve classroom practices. Throughout the sessions, individual ratings and analyses of teaching are shared with partners or with a group. This approach adds enrichment from the various perspectives.

> *Sample Mainstreaming Issues: Collection of reality based classroom situations involving handicapped children; guidelines for discussing classroom situations with handicapped children; focusing on the child vs. focusing on the handicap, etc.*

Core Unit C. Managing the Preschool Classroom

This unit provides training on how to use classroom planning to avoid management problems and the use of techniques to reduce inappropriate behavior in the classroom.

Management is approached as the process of organizing and structuring the classroom, its activities, and the responsibilities of staff and children. Management is directed towards helping children assume responsibility for their own behavior in a climate that maximizes individual freedom and minimizes disturbances in the learning environment.

Criteria for classroom management, establishing rules and limits, scheduling, and the provisioning and use of materials are explored in the context of minimizing the occurrence of management problems. Learners are given practice in developing rules and limits, arranging classroom activities, developing daily plans, demonstrating the arrangement of materials, and extending and adapting classroom materials to meet individual needs.

Learners are also helped to know how to handle inappropriate behavior when it occurs. Topics covered include: determining the problem; anticipating and re-directing inappropriate behavior; attending to positive behavior; contingent use of classroom activities; using time out; why punishment is an inappropriate form of classroom management.

The unit is written to be used with a group of fellow learners and a trainer, or individually. Many of the activities assume that learners are working in or have easy access to preschool classrooms. Learner activities involve classroom observation, demonstration, working with children, thought and problem-solving activities.

> *Sample Mainstreaming Issues: Need for a stable environment and implications for development of rules; e.g., replacing materials where they belong; individualized exceptions to rules such as food allergies and "no braces in the sandbox"; developing self-help skills; etc.*

Closing Statement

One final note is in order as a comment on the conclusion of the FLS as a NIE supported project. Throughout the four year period, we have had the pleasure of working with a large group of exciting and dedicated early childhood educators. We as the FLS staff recognize that our endeavors together have benefited us and led to our own growth. In planning the future directions of the FLS effort, we have experienced the recurrent delight of being able to call our field contacts on the phone and having them respond wholeheartedly to our requests for their help and participation. Comments such as "Yes, please be sure to count us in," and "I can't wait to work with you folks again," suggest to us that the FLS project has been worthwhile. It is with a sense of eagerness that we look forward to a continuation of our work in the field of early childhood staff development.

APPENDIX A:

Materials Related to Historical Overview

·Descriptions of FLS Units

SUMMARY OF FLEXIBLE LEARNING SYSTEM MODULES

ANALYZING CHILDREN'S BOOKS FROM A CHICANO PERSPECTIVE.......120 pp.

Written to give learners practice analyzing, evaluating, and selecting books and other educational materials for children of Mexican-American heritage.

ARRANGING THE CLASSROOM FOR CHILDREN........................252 pp.

Uses basic principles of interaction between space, materials, classroom activity, and educational goals to help early childhood educators achieve an optimal classroom arrangement for a variety of activities and child groupings.

COMMUNICATING AND WORKING WITH PARENTS......................196 pp.

Designed to give learners practice in verbal and written communication with parents; includes listening, problem solving, feedback, awareness of cultural and ethnic differences, parent surveys and mutual planning of parents' role in the classroom.

DEVELOPING CHILDREN'S SENSE PERCEPTION......................108 pp.

Written for learners interested in using sensory experiences to promote learning in the early childhood years.

ENRICHING LITERATURE EXPERIENCES OF CHILDREN................184 pp.

Provides practice in developing personal criteria for selecting children's books and enriching story telling experiences.

EXPLORING CHILDREN'S THINKING: PARTS 1-3...................474 pp.

A series of three books exploring the development of logical operations in young children and their role in conceptual development. Accompanied by 4-part narrated color videotape series, The Growing Mind.

PART 1: THE DEVELOPMENT OF CLASSIFICATION.............196 pp.

PART 2: THE DEVELOPMENT OF ORDER RELATIONS............190 pp.
(SERIATION)

PART 3: THE DEVELOPMENT OF QUANTITATIVE RELATIONS......98 pp.
(CONSERVATION)

THE GROWING MIND: A PIAGETIAN VIEW OF YOUNG CHILDREN.......2 hrs.

Four 30-minute color videotapes illustrating the development of classification, seriation, conservation, and spatial reasoning in children four to eight years of age.

HELPING CHILDREN DEVELOP HEALTHY SELF-CONCEPTS..............210 pp.

Helps learners understand how the development of a healthy self-concept is affected by classroom practices.

AN INTRODUCTION TO EARLY CHILDHOOD EDUCATION................122 pp.

Designed to help learners clarify and develop their own educational philosophy and its implications for teaching practices in early childhood education.

MANAGING THE PRESCHOOL CLASSROOM.............................98 pp.

Provides training on using classroom planning to avoid management problems and on techniques to reduce inappropriate behavior in the classroom.

PROBLEM SOLVING WITH CHILDREN...............................106 pp.

For persons interested in helping children develop problem-solving skills and attitudes and with helping children assume more responsibility for classroom problem-solving.

SELECTING CHILDREN'S BOOKS FROM A BLACK PERSPECTIVE.........232 pp.

Designed to give learners an understanding and rationale for using a Black perspective to analyze and evaluate the illustrations and written content of children's books.

TEACHING CHILDREN TO INTEGRATE LANGUAGE EXPERIENCES.........248 pp.

Provides a teaching process with techniques for helping children use and extend their personal experience in language arts activities.

UNDERSTANDING CHILDREN'S PLAY THROUGH OBSERVATION...........106 pp.

Focuses on the importance of play to child development, and types of adult intervention in children's play. An accompanying 28 minute 16 mm color-sound film, Observing Children's Play, is important to this unit.

USING TOYS AND GAMES WITH CHILDREN.........................248 pp.

Written for learners who want to become more skilled in using toys and games to help children between three and eight years of age learn basic skills and concepts.

WORKING WITH CHILDREN'S CONCEPTS............................136 pp.

Explores conceptual learning within a framework of the child's natural representations and sharing of interests and the developmental organization of represented knowledge.

ANALYZING CHILDREN'S BOOKS FROM A CHICANO PERSPECTIVE

Oscar Uribe, Jr. and
Joseph S. Martinez

This unit helps learners analyze, evaluate, and select books and other materials for use in classrooms for young children of Mexican-American heritage. Some teachers have used it as a general guide for analyzing materials for their representation of Chicano history and culture.

The introductory material explores the impact of children's books on self-concept and children's attitudes toward other ethnic groups. Evidence is presented concerning the value of multi-ethnic books in changing attitudes toward minority people.

Evaluation criteria are presented in two sections. In section one, learners explore guidelines for detecting culturally biased content. The issues of overgeneralization, evaluative and demeaning statements, and ethnic stereotypes provide a framework for analyzing and evaluating written text as well as illustrations. Section two explores the importance of recognizing culturally accurate information, language appropriateness, accurate source and treatment of material, and factual errors.

Each section contains examples of pictures, illustrations and text taken from books often recommended for use with the Chicano child. The learner can compare his/her application of the guidelines with the authors' evaluations. The unit concludes with self-assessment activities in which learners rewrite sample paragraphs after examining them for distortions specified in the guidelines.

A variety of reference bibliographies provide additional information and examples for further evaluation and topic exploration.

Related FLS topics: Communicating and Working with Parents; Selecting Children's Books with a Black Perspective; Enriching Literature Experiences of Children; and Helping Children Develop Healthy Self-Concepts.

ARRANGING THE CLASSROOM FOR CHILDREN

Keith Alward

This unit is designed to help early childhood educators achieve an optimal classroom arrangement for a variety of activities and child groupings. It addresses basic principles of interaction between space, materials, classroom activities, and educational goals. It is particularly suited to educators interested in providing an open-education setting where children assume responsibility for their own activities. It can be useful for teachers of older children as well.

Part I introduces six basic classroom areas described by 12 variables covering size, boundaries, materials, working surfaces, and functions. Exploration of the relationship of variables to classroom operations leads learners to the solution of management problems through classroom arrangement and modification of the six basic areas to suit individual needs.

Part II provides an illustrated and descriptive guide to physical facilities and resources. Topics covered are: storage, working surfaces and seating, the floor, raised work and play platforms, enclosed areas, room and area dividers. References include over 60 publications, films, and additional resource addresses.

This book can be used individually or with fellow learners. Chapters contain a topic introduction, learner-activities, and a follow-up discussion. Learner-activities include classroom observations, simulation, and decision-making problems. Ripout activity forms are provided for recording activity results.

The chapters are integrated to help learners: recognize, describe, and evaluate six fundamental types of classroom areas; know how to manipulate area variables to improve the function of the classroom.

Additional FLS resources on this topic: Managing the Preschool Classroom; Problem Solving with Children; Helping Children Develop Healthy Self-Concepts; Understanding Children's Play Through Observation; and An Introduction to Early Childhood Education.

COMMUNICATING AND
WORKING WITH PARENTS

Angela Garcia,
Margaret Robinson,
Dennis Sims

This unit is designed to give learners insight into verbal and written communication with parents.

The ten sessions in this unit have been designed as workshops. Each provides opportunities to build upon skills learners already have and to practice new skills in workshops, family, and work settings. Each session has a central theme, and builds upon the preceding sessions.

Unit themes cover: perception and feedback in communication; communication and awareness; parent roles in the program; facilitating techniques; parent surveys.

Each session begins with sharing and reviewing individual experiences in previous activities. Opportunities are provided to explore the relationship of themes to the learner's personal interests.

Learning activities provide an opportunity to practice several important communication skills: how to respond to an emotional or critical outburst from someone else; how to encourage greater parent participation in your classroom; how to respond when you feel misinterpreted; how to recognize non-verbal messages; and how to set reasonable goals that you can effectively implement.

Other FLS materials relating to this topic: Problem Solving with Children; Analyzing Children's Books from a Chicano Perspective; Selecting Children's Books with a Black Perspective; Using Toys and Games with Children; and Helping Children Develop Healthy Self-Concepts.

DEVELOPING CHILDREN'S SENSE PERCEPTION

Bethanie Gilbert and
William Finzer

This unit is intended to help practitioners use sensory experiences to promote sensory learning in the early childhood years. The focus on sensory-based learning activities is particularly well suited to beginning teachers and paraprofessional staff.

A sequence of learning activities for each sense mode include texture, weight, size-shape, taste, hearing, and sight. The learning-activity sequence involves a sensory experience for adults, constructing a sense-word list, exploring and constructing learning objectives for children, diagnosing sensory skills in children, and creating sense-modality learning experiences for children.

Learning objectives for children incorporate experiences in naming, matching, comparing and contrasting, classifying, ordering, describing, identifying, tracing, predicting, and explaining. Learners are guided in constructing activities tapping these skills in each of the sense modes. Diagnosing children is explored in the context of natural observations and adult probes during normal classroom activities. Learners are guided to develop their own objectives and diagnostic strategies.

Individual and small group activities, classroom observations, and working with children are integrated to achieve: skill in promoting cognitive growth through sensory experience; skill in diagnosing the child's conceptual uses of senses; skill in using diagnosis to plan and provide sensory activities that support cognitive growth; the development of a sense-perception curriculum.

Additional FLS resources on this topic: Exploring Children's Thinking (three-volume series); The Growing Mind (four videotapes); Working with Children's Concepts; Using Toys and Games with Children; Teaching Children to Integrate Language Experiences; An Introduction to Early Childhood Education; Problem Solving With Children.

ENRICHING LITERATURE EXPERIENCES OF CHILDREN

JoEllyn Taylor

This unit explores the potential uses of children's literature and helps learners develop guidelines for the selection of books and methods for planning and facilitating children's experiences with literature. The material is written for those who work with children four to eight years of age.

A variety of short articles and learner activities explore the uses of literature, its importance, and its relationship to self-concept, personal values and personal experiences. Initial criteria for book selection and personalized literature experiences are explored within a wide range of available children's books. Learners are guided to clarification and development of their own values and criteria and their use in developing lesson plans for literature experiences.

Learner activities involve thought problems, the generation and application of criteria to books and lesson plans, role-playing, group discussions and sharing, and exploration of available literature. This unit is designed for use in a group setting and includes self-assessment activities provided throughout the unit.

Related FLS topics include: Helping Children Develop Healthy Self-Concepts; Teaching Children to Integrate Language Experiences; Analyzing Children's Books from a Chicano Perspective; and Selecting Children's Books with a Black Perspective.

EXPLORING CHILDREN'S THINKING:

Part 1, Classification
Part 2, Seriation
Part 3, Conservation

Keith Alward and Associates

This three-volume series introduces the learner to children's thinking and its progressive patterns of organization between three and eight years of age. This series is based on Jean Piaget's work and is written for those interested in children's thinking and the application of Piaget's theory to early childhood education.

This series covers the topics of Classification, Part 1; Seriation (order relations), Part 2; and Conservation (quantitative relations), Part 3. The preconceptual, intuitive, and concrete-operational stages of development are explored in each of the topic areas. The development of classification is revealed in how children use judgments about similarities and differences and the concepts of "some" and "all". Order relations (seriation) concern how children reason about sequences such as orders from least to most. Quantitative relations concern all notions of units and number and their application in such areas as measurement and arithmetic. The development of quantitative relations is examined with the use of conservation tasks which reveal children's gradual understanding that the arrangement of objects does not affect their amounts.

Learner activities consist of thought-problems, role-playing, child interviews, discussions and sharing, reading, and viewing the videotapes (see The Growing Mind). Pull-out guided interview forms are provided for all interviews. The material is designed to be used with a group of learners although it should be informative to the independent learner. The series contains an introduction to Piaget and his general theory, its educational implications, and transcripts of illustrative videotapes. There is also an annotated bibliography describing most of Piaget's translated works and over 50 other publications and films.

Learners will gain skill and practice in working with children to explore their thinking. Learners will also gain a general insight into the developmental limitations as well as the richness of children's thinking and its relationship to the goals and practices of early childhood education.

Other related FLS topics: Problem Solving with Children, The Growing Mind (four videotapes); Working with Children's Concepts; Using Toys and Games with Children; and Developing Children's Sense Perception.

THE GROWING MIND:
A PIAGETIAN VIEW OF CHILDREN

Keith Alward

This is a set of four, 30-minute, broadcast-quality, color videotapes covering the mental development of class, order, quantitative, and spatial relations in children between four and eight years of age. Each of the videotapes is narrated and self-contained. Three of the videotapes are complemented by corresponding FLS books entitled Exploring Children's Thinking. The fourth videotape (spatial relations) is not accompanied by written material.

The set illustrates a variety of interviewers working in a one-to-one setting with 13 children within the preconceptual, intuitive, and concrete-operational stages of mental development. Many of the same children appear in several of the videotapes, permitting comparisons of performance in different knowledge areas. Likewise, the same child often appears in different tasks within the same knowledge area. Presentation of 12 classic Piagetian tasks are illustrated with a clear analysis of the symptoms and organization of the performance within the three stages.

The Growing Mind set is availabe in 1/2 inch reel-to-reel and 3/4 inch videotape cassettes. The videotapes are entitled: The Development of Classification (30 minutes); The Development of Order Relations: Seriation (28 minutes); The Development of Quantitative Relations: Conservation (32 minutes); and The Development of Spatial Relations (29 minutes).

Additional FLS material related to these topics: Using Toys and Games with Children; Developing Children's Sense Perception; An Introduction to Early Childhood Education; Communicating and Working with Parents; and The Growing Mind.

HELPING CHILDREN DEVELOP HEALTHY SELF-CONCEPTS

Natividad DeAnda

This unit is for learners who want to develop an understanding of the effects of classroom situations on children's self-concepts. What is a healthy self-concept? How do teaching practices affect children's self-concepts? When are teacher practices demeaning, restricting, overrating, or enhancing to children's self-concepts? These are the questions addressed in this unit.

One of the points emphasized is that children's self-concepts develop as they take credit for what they do and what they are as individuals, and as they integrate the results of new experiences into beliefs about themselves.

The first 60 pages contain guidelines and lesson plans for conducting an eight-session course or series of workshops. These are followed by three approximately 40-page readings about the nature of self-concept and its development with examples and discussions of classroom situations.

The learner progresses through the workshop series in a sequence of steps leading to a deeper understanding of the influence of adult behavior on children's self-concepts. Learner activities include identifying positive/negative classroom situations, learning to use specific criteria for detailed analysis of similar teaching situations, applying these to actually observed classes, and formulating and discussing ways to improve classroom practices. Throughout the sessions, individual ratings and analyses of teaching are shared with partners or with a group. This approach adds enrichment from the various perspectives.

Other related FLS topics: An Introduction to Early Childhood Education; Teaching Children to Integrate Language Experiences; Problem Solving with Children; Managing the Preschool Classroom; Communicating and Working with Parents; Analyzing Children's Books from a Chicano Perspective; Selecting Children's Books with a Black Perspective; Arranging the Classroom for Children; and Using Toys and Games with Children.

AN INTRODUCTION TO EARLY CHILDHOOD EDUCATION

Judith Johns Hubner and
Marlene Cresci

This unit is designed to help learners clarify and develop their own educational philosophy and its implications for teaching practices in early childhood education. It explores a variety of early childhood education models and provides a framework for understanding the educational philosophy and practices of the Flexible Learning System

The unit focuses on the analysis of four educational models representing a broad range of practices in contemporary programs: The Responsive Model; The Open Education Model; The Behavior Analysis Model; and the Engelmann-Becker Model. An earlier Laboratory product, the Early Childhood Information Unit, is an audio-visual print package which provides an overview of the four models. It is an integral part of this unit.

Learner activities include: reading, group discussions, presentations, viewing filmstrips, observing programs, and developing and participating in learner-designed activities. Unit activities are integrated to accomplish: knowledge of model programs in early childhood education; clarification of personal values/goals/priorities in working with children; articulation of a personal model of early childhood education.

Additional FLS materials related to this topic: Arranging the Classroom for Children; Managing the Preschool Classroom; Problem Solving with Children; Helping Children Develop Healthy Self-Concepts; Understanding Children's Play Through Observation; Using Toys and Games with Children; Developing Children's Sense Perception; and Communicating and Working with Parents.

MANAGING THE PRESCHOOL CLASSROOM

Judy Brown

This unit provides training on how to use classroom planning to avoid management problems and the use of techniques to reduce inappropriate behavior in the classroom.

Management is approached as the process of organizing and structuring the classroom, its activities, and the responsibilities of staff and children. Management is directed towards helping children assume responsibility for their own behavior in a climate that maximizes individual freedom and minimizes disturbances in the learning environment.

Criteria for classroom management, establishing rules and limits, scheduling, and the provisioning and use of materials are explored in the context of minimizing the occurrence of management problems. Learners are given practice in developing rules and limits, arranging classroom activities, developing daily plans, demonstrating the arrangement of materials, and extending and adapting classroom materials to meet individual needs.

Learners are also helped to know how to handle inappropriate behavior when it occurs. Topics covered include: determining the problem; anticipating and re-directing inappropriate behavior; attending to positive behavior; contingent use of classroom activities; using time out; why punishment is an inappropriate form of classroom management.

The unit is written to be used with a group of fellow learners and a trainer, or individually. Many of the activities assume that learners are working in or have easy access to preschool classrooms. Learner activities involve classroom observation, demonstration, working with children, thought and problem-solving activities.

Other FLS units related to this topic: Helping Children Develop Healthy Self-Concepts; Arranging the Classroom for Children; Problem Solving with Children; An Introduction to Early Childhood Education; and, Understanding Children's Play Through Observation.

PROBLEM SOLVING WITH CHILDREN

Joanne Yinger

This book was written for persons interested in helping children develop problem-solving skills and attitudes. The focus is on offering adults an opportunity to develop skills in helping children assume more and more responsibility for their own problem solving and their own learning. Persons interested in increasing their own problem-solving skills or helping children and adults become better problem solvers should find this book informative. While it was designed to be used with a group of learners, it is capable of independent use.

Problems are treated as opportunities to learn where individuals or groups want something changed, are personally affected, and in a position to assume responsibility for solving the problem. Problems in the cognitive, social and personal domains are considered. Skills in problem identification and clarification, idea generation, implementation of solutions, and evaluation of results are explored.

Over half of the book is devoted to teaching techniques for guiding children in problem-solving activity. Techniques are grouped under: "tuning in", "drawing out", guiding and supporting the creation of possible solutions. Skills involve: listening, paraphrasing; questioning; creating analogies and imagery; connecting "far-out" ideas to the reality of the problem to be solved.

Recall of personal problem-solving experiences, observations of children, classroom practice, and roleplay are embedded in 26 learner activities. Rich examples of a wide range of classroom problems are interspersed among learner activities.

Related FLS topics: An Introduction to Early Childhood Education; Arranging the Classroom for Children; Using Toys and Games with Children; Developing Children's Sense Perception; Exploring Children's Thinking; The Growing Mind; Helping Children Develop Healthy Self-Concepts; Understanding Children's Play Through Observation; Managing the Preschool Classroom; Communicating and Working with Parents; and Working with Children's Concepts.

SELECTING
CHILDREN'S BOOKS WITH A
BLACK PERSPECTIVE

Francione Lewis

This book was written to enable learners to understand and to use a Black perspective in evaluating the illustrative and written content of children's books.

The introduction stresses the importance of appropriate reading materials to enhance the learning of both Black and non-Black learners who may be influenced by expressed attitudes about Black people. A Black perspective is applied to illustrations and text to determine how the Black experience is portrayed. Learners interested in expanding their understanding of Black experiences and their relevancy to classroom literature should find this work informative.

A variety of criteria derived from a broad range of cultural characteristics are used to analyze and evaluate illustrations and text. Learners are guided in their application of criteria to selected books and provided with opportunities to check themselves against the author's evaluations. Opportunities for agreement and disagreement are encouraged, along with opportunities to recognize that all cultures offer a unique perspective.

Articles and stories by a variety of authors contribute to an understanding of Black experiences. The concept of Black perspective is derived from an historical analysis. An understanding of this history is acquired through historical overviews, discussions with other learners, and the use of criteria for judging the historical accuracy of written material. References to resource materials in the area of Black experiences and guidelines for supplementing inadequate materials are covered.

Books used for application of the unit criteria are: Evan's Corner, Hill, Elizabeth S., New York, Holt Rinehart and Winston, 1967; The Black BC's, Clifton, Lucille, New York, E. P. Dutton & Co., Inc., 1970; Goggles, Keats, Ezra, Jack, New York, Collier Books, 1969; Song of the Empty Bottles, Molansky, Osmond.

Other FLS units related to this topic: Analyzing Children's Books from a Chicano Perspective; Helping Children Develop Healthy Self-Concepts; Enriching Literature Experiences of Children; and Communicating and Working with Parents.

TEACHING CHILDREN
TO INTEGRATE
LANGUAGE EXPERIENCES

Margot Biestman

This unit introduces the concept of teaching language arts in relationship to the development of a child's healthy self-concept. It is a practical book. It provides techniques for helping children integrate their personal experience in language arts activities. Since the focus of the unit is on the process of teaching and learning, what is taken from the unit may be applied to learning activities other than language arts. The unit provides a unique view into the dynamics of creative production and its representation.

It is divided into four sections which may be taught separately or used in sequence. The sections include opportunities for a child to assimilate or integrate his/her own experiences in listening, fantasy, memory of familiar past experiences, and spontaneous classroom activities with expressions in art, movement-dance, and written and oral language. Children are given the opportunity to gain prereading and reading skills from these experiences- Each section provides the learner with a guided sequence of activities which includes: presentation of criteria for an integrated language experience; sharing, reviewing and evaluating their experience; planning activities for children based on their experience; implementing their plans; evaluating their implementation and children's responses. The learner has an opportunity to move from using plans as designed in the unit with modifications to extending and further adapting plans for follow-up activities for children, and then using elements from the teaching process in designing plans for their own activities. May rich examples of plans adapted by learners are provided throughout the text and in the separate learner's resource booklet. Handy forms provide methods for learners and instructors to evaluate activities. Beginning and advanced levels of performance are suggested for all activities and are designed for children from preschool to third grade.

Other FLS units related to this topic: *Developing Children's Sense Perception*; *Helping Children Develop Healthy Self-Concepts*; *Working with Children's Concepts*; and *Enriching Literature Experiences of Children*.

UNDERSTANDING CHILDREN'S PLAY THROUGH OBSERVATION

Judy Brown

This is a unit on how to observe child's play and on the classroom conditions that promote productive play activity. The unit focuses on developing skills in observing and analyzing children's play and relating them to appropriate adult roles.

The unit activities and an accompanying film are organized to help learners develop specific play intervention strategies such as when to ask children questions, provide information, and redirect play. Observation forms are provided.

The unit is designed to be used with a group of fellow learners. Active small group discussion is an important aspect of the learning process for this unit. Completion of this unit should enable learners to: discuss why play is important for a child's growth and development; make objective descriptions of a child's play activity; determine when to provide additional resources for increasing children's learning through play; determine when to intervene, extend, or adapt the play situation to promote children's learning; create a classroom environment to achieve a set of objectives; determine when to participate as a co-player and when to redirect the play situation.

The unit is accompanied by a 28-minute, 16-mm, color-sound film entitled Observing Children's Play. This film is a non-narrated sequence of children engagin in social play. The majority of unit activities require making observations from the film

Additional FLS resources on this topic: An Introduction to Early Childhood Education; Arranging the Classroom for Children; Helping Children Develop Healthy Self-Concepts; Working with Children's Concepts; Managing the Preschool Classroom; and Problem Solving with Children.

WORKING WITH CHILDREN'S CONCEPTS

Keith Alward

This unit is about concepts and their character in the early childhood years. It concerns children between two and eight years of age. This is not a how-to-do-it book. It focuses on helping adults understand the nature, organization, and development of concepts and the relationship of these to represented and shared interests. Anyone interested in concepts should find this book informative.

Concepts are viewed as representable, shareable, and as organized knowledge formulated around interests. They are susceptible to agreement and disagreement, and, in some cases, capable of being forgotten.

Familiarity with the series, Exploring Children's Thinking, provides an important foundation for understanding this book. An understanding of the mental development of classification skills should be considered a prerequisite. Both the organization and development of concepts are strongly related to the child's understanding of class and order relations.

Learner activities involve analyzing adult concepts and their representation, adult classification activities, interviews of children, classroom observation, and thought problems. Written material provides an introduction and follow-up to each activity. The appendix contains notes on clinical interviewing and a bibliography of over 60 publications and films. Activities are integrated to help students learn; ten characteristics of concepts; how concepts are organized; how the organization of concepts changes with mental development; how concepts are represented; how interests determine the formation of concepts; guidelines for educational practice that support conceptual growth.

Other FLS materials related to this topic: An Introduction to Early Childhood Education; Exploring Children's Thinking; The Growing Mind; Developing Children's Sense Perception; Using Toys and Games with Children; Understanding Children's Play Through Observation; Problem Solving with Children; and Teaching Children to Integrate Language Experiences.

APPENDIX B:

Materials Related to FLS Development

·Outline of Research and Development
·Paper: Elements of Training

FLEXIBLE LEARNING SYSTEM

OUTLINE OF STEPS IN RESEARCH AND DEVELOPMENT

1. Identification
    - A. Select appropriate focus for unit
    - B. Determine general objectives and scope
    - C. Review by development staff
    - D. Identification of staff members as resources
2. Outline
    - A. Review literature
    - B. Determine specific objectives
    - C. Determine process to be used in teaching competency
    - D. Determine materials to be developed (e.g. A/V, etc.)
    - E. Complete rough draft
    - F. Review by outside resource person
3. Preliminary Form
    - A. Audiovisuals in rough form
    - B. Introduction section completed (rationale)
    - C. One page summary completed
    - D. Complete form of unit for testing
    - E. Work with research staff on evaluation and feedback forms
    - F. Plan for preliminary test
    - G. Review by internal staff
    - H. Revisions completed

4. Preliminary Field Test

   A. Selection of sample completed

   B. Preliminary test questions research design approved

   C. Site and contact person

   D. Test start date

   E. Number of learners

   F. Trainer (Laboratory)

   G. Trainer (Site)

   H. "Q" Sort administered

   I. Pre-test administered

   J. Biographical data cards collected

   K. Post-test administered

   L. Test completed

   M. Learner feedback received

   N. Trainer feedback received

   O. Report completed

   P. Review by external reviewer(s)

   Q. Development of MFT form

   R. Plan for Main Field Test

   S. Review by internal staff

5. Main Field Test

   A. Selection of sample competencies

   B. Main test questions research design approved

   C. Site and contact person

   D. Test start date

   E. Number of learners

   F. Trainer (Laboratory)

    - G. Trainer (Site)
    - H. "Q" Sort administered
    - I. Pre-test administered
    - J. Biographical data cards collected
    - K. Post-test administered
    - L. Test completed
    - M. Learner feedback received
    - N. Trainer feedback received
    - O. Credits given
    - P. Data analysis
    - Q. Report completed
    - R. Review by external reviewer(s)
    - S. Decision
    - T. Plan for Operational Field Test
    - U. Review by internal staff

6. Operational Field Test
    - A. Selection of sample competencies
    - B. Operational test questions research design approved
    - C. Site and contact person
    - D. Test start date
    - E. Number of learners
    - F. Trainer (Laboratory)
    - G. Trainer (Site)
    - H. "Q" Sort administered
    - I. Pre-test administered, work samples collected
    - J. Biographical data cards collected
    - K. Post-test administered, work samples collected

L. Test completed

M. Learner feedback received

N. Trainer feedback received

O. Credits given

P. Data analysis

Q. Report completed

R. Review by internal staff

S. Revisions

T. Review by internal staff

7. Final Product Development

A. Final form of module completed (including A/V materials)

B. Draft of final unit completed

C. Revision by internal staff

D. Editing completed

E. Final product copy

ELEMENTS OF TRAINING

This is an important section providing a brief description of 25 elements that go together to provide the training experience which is the basis of the FLS instruction design.

In this section we will explore some of the elements involved in Flexible Learning System training. These elements, which are not titles of units, are nonetheless part of the content of the FLS program; they are the vehicles by which the sharing occurs. One can find evidence for these elements in the FLS training workshops and in the analysis of the content of the units themselves. (See sections on "Sharing" and "FLS Contents").

The elements, by and large, apply to social sharing or training in groups. They do not so much concern the individual working by his or herself although many of the same issues can be translated to individual activity. Also, many of these elements reflect experiences in workshops of rather lengthy and intense duration, often for five days, eight hours a day, with a staff of approximately five and maybe 30 to 40 participants. This format has its advantages as a method of sharing, but it is agreed that it may be difficult to duplicate and may not always be appropriate to the instructional conditions or to the learning task at hand. However, most of these elements have a relevancy to different types of sharing formats such as a college course, four-hour workshops, or any variety of settings. This relationship to different settings would of course require some translation of these elements.

A brief review of this list of elements indicates a variety of relationships between the FLS units and these elements. In some cases the elements themselves are the major concern of the unit. In others, these elements are part of the unit activities and serve to develop the the process embedded in these units.

In the following short discussion of each of these elements, the sequential presentation is not meant to imply any particular ordering of relationships. That is, it is not assumed that training starts with "introductions" and that "developing a collective consciousness" is to be followed by "warm-up activities", etc. All of these elements are interdependent in mutual ways and many of them can be brought to bear simultaneously. For example, one might consider a group introducing activity that involves personal experiences and provides the function of a warm-up activity.

GROUP INTRODUCTIONS

It's important in working with any group of people to provide an opportunity for members to become familiar with each other in a comfortable way, learning something about each other. There are many possible formats. One example involves pairing people to exchange information, often with a specific focus that might provide a warm-up for activities or issues to follow. That sharing may involve personal experiences, the reason for being in the workshop, professional background, personal likes and dislikes, something they could bring from home to reflect their interest in the particular training situation and so forth. We've had these pairs report to the total group with each individual reporting on what their partner shared, thereby taking the responsibility to actively listen and reflect back in their own terms. This provides the other partner an opportunity to hear what he/she has communicated and to correct any distortions. This example simply illustrates some of the concerns, considerations and mechanisms for introducing people. It is not a model to be copied.

ESTABLISHING COLLECTIVE CONSCIOUSNESS

If a group is to become a group and provide some of the benefits that can derive from group activity, then it's important to make an effort to create conditions in which the group as a whole begins to develop some identity, some collective consciousness. By and large, this can not be achieved within a single activity. It's something that needs to be considered throughout the evolution of the group. The extent to which a productive collectiveness can be formed is a function of the extent to which participants are allowed to actively participate, to take responsibility and ownership for their activities, and to be involved in respectful and mutual ways, with opportunities for agreeing and disagreeing, and expressing needs and concerns.

WARM-UP ACTIVITIES

Prior to an activity it's helpful if people have an opportunity to warm-up to it, to bring themselves into a state of mind in keeping with what will be expected. Personal experience is an important element in warming-up to something. For example, the children's play unit begins with a reflection by participants upon one of their earliest play experiences, followed by some form of sharing and discussion. This sets a tone for the issues to follow and gives people a sense of the ways they will be working with each other, a sense of mutual respect for common personal needs and experiences.

STRUCTURING OF GROUPS

The use of groups in learning activities requires a flexible conception of the group make-up. It is not necessary that people be working within the same group throughout the training activity. We have often broken large groups into small groups. We've had people move from one small group to another; having some groups last for a very short period of time with others lasting longer. We've dissolved small groups into total group activities. A number of factors should be kept in mind. For people who are new to each other, the first group they form, the first opportunity to share and introduce each other, somehow makes the group special. If it is disbanded too early or treated in a cavalier fashion, as just a convenience for the trainer, one immediately does a disservice to the sensitivity of the participants. Often people need to be given some forewarning of the types of the groups they may be involved in so they can think about who they might be working with and again this is more often the case with people who are new to each other. People are often hesitant to open up to a group unless they've worked with or already know its members. In many cases, the trainer or instructor may feel that it's desirable to separate people already familiar with each other and to expose new people to each other. This should involve the use of random assignment procedures so that it's clear that the grouping is not based on pre-selected criteria or hidden agenda.

EXPLORING PERSONAL EXPERIENCES

The value of using personal experiences has already been mentioned. It is such an important issue that it stands as a separate element in training. Essentially, it refers to the need to constantly provide opportunities for people to use examples from their own lives and activities which they have selected as being important and relevant to the issues at hand. This effort to personalize the training activity and to relate it to their own life is one of the surest ways to develop the sense of ownership which is critical for the generalization of training.

ACTIVITY PACING

Any activity has a pace which is the rate at which the activity moves. It might be thought of in terms of the amount of time that a particular focus is maintained and the number of focuses within a period of time. The issue of pacing cannot be quantitatively specified as to what is most desirable. The point is to recognize that a pace is always an element and it may be too slow or too fast for a variety of people within the groups. It's important to watch for indicators that things are dragging, or that they are moving too fast for people to assimilate the materials either affectively or cognitively. There should be time to express concerns and pursue topics that strike participants as terribly important. Often it needs to be recognized that members of the group have different needs in terms of pace with respect to a particular topic, issue or concern. Opportunities often need to be provided for individuals to step out of the group and work at a slower or faster pace either alone or with others who have similar needs.

CHANGING PERSPECTIVES

The concept of the need for changing perspectives, as a basic issue with the Responsive Education Program, is an outgrowth of the theoretical model of O. K. Moore (Moore, 1969 and Alward, 1973). O. K. Moore's terms of this concept included being either active or passive, receptive or critical and evaluative or reflective upon one's own activities. It may be possible to categorize all perspectives into these three categories, but any particular focus on an activity is a perspective, and the idea of changing perspectives is simply recognizing that learners need an opportunity to bring different types of focuses to an issue. For example, being a member of a large group or small group, lecturing or dialoguing, describing or demonstrating, constructing or overseeing something, taking notes on one's own or taking notes for others, are all different focuses or perspectives.

TRANSITIONS

Between activities and between focuses within activities there is a transition point, a moving from one aspect to another. Each of these transitions has to be considered in terms of its social, emotional, cognitive, and even physiological characteristics. The transitions need to be thought of in terms of pacing, closure, incompleteness (closing in on an issue too soon, or leaving an issue before closure has been achieved). One must consider the pros and cons of leaving an issue while there are emotions that need to be resolved. People often become terribly excited in a workshop and need to move from the excitement in a gradual, rather than abrupt way. Further, a transition from an exciting to a very dull activity may lose the energy and momentum of the group and lead to less involvement and motivation.

BRAINSTORMING

Brainstorming is a method of getting people to generate a great deal of pre-conscious or "below the surface" insights. I think the benefit of brainstorming needs to be understood in terms of the tendency of the pre-conscious and subconscious mind to provide a great deal of richness that is not easily brought to conscious forms. Brainstorming is a way of having people generate material rapidly (often as a group) in order to get at some of the more hidden associations with the material under consideration. A method of getting people to brainstorm might be to give a very clear and limited focus for reflecting about some personal experience. This is followed by a rapid group generation of this reflection to be recorded by a group recorder. Often, it may be difficult, particularly if the material is affectively loaded, for people to brainstorm in a large group. They may need the safety of smaller groups. Such groups with more intimacy and more familiarity among the members may be used for a brainstorming activity prior to sharing the results with a larger total group.

CRITICAL ANALYSIS

Often, the opposite of brainstorming is more appropriate and might involve a rather deliberate and thorough critical exploration of the material. This is in contrast to the kind of playful and preconscious generation associated with brainstorming.

FOCUSING

Focusing is an important ingredient in all sharing and learning activity. It's concerned with the clarity of the task and purpose given to individuals as well as the boundaries, limits or size of the task at hand. If you offer very broad questions like "what makes good education?" you have provided a clear focus, but you've also provided a very broad focus in the sense that there is a great deal that can be said. If you're not interested in hearing everything everyone has to say, but you do want to the basic ideas, then something like brainstorming may be used first followed by some later reflection on the contents generated. We've found that it's very helpful to give people limited or clear focuses so they know that they're dealing with. This should be done in a way that recognizes the breadth of the focus and provides a setting in which the activity corresponds to the breadth of the topic.

FOREGROUND/BACKGROUND FOCUSING

Another way in which focusing can be talked about is whether it's directed to what is immediately at hand (the foreground considerations) or whether focusing is directed to background issues. There often is a great deal of rich material contained in the interrelationships and connections between what has been left in the background and what has been brought to the foreground. By moving participants and focuses back and forth between these two levels, it is possible to mine that rich material.

REPRESENTATION AND CONSTRUCTION

We have repeatedly sopken to the importance of representation and construction. It constitutes the underlying status of intellectual development and social sharing. By representation we mean all those things involved with the construction of a thing to "stand for" something else: a sentence, a workshop, an example, an imitation, a book or a painting, are all ways of representing something. Because the representation vehicles are often external to the person constructing them, they also constitute a basis for sharing and reflecting.

REFLECTION UPON REPRESENTATION

Not only does representation provide the vehicle for sharing between people, but the act of constructing a representation is itself an act of clarifying what one knows, what the elements are in any given set of concepts, and what the relationships are between those elements. Thus, to either collectively or individually reflect upon and look at one's representation and to analyze them is a method of advancing one's understanding. One way of seeing this phenomenon is to regard previous forms or representation as providing a stage for a following analysis and reconstruction of a new representation. This new representation then constitutes a new understanding which can start the cycle once again. This construction-analysis-reconstruction process is critical to our individual growth and critical to the growth of insight generated in social and collective settings.

RECORDKEEPING

An important facet of training involves providing mechanisms for keeping track of what is going on. In a sense this is a matter of providing evidence of the representations that have been constructed so that they can be reflected upon and searched for whatever new insights they may provide. Mechanisms for recordkeeping cover a wide gamut. A common one we have used involves providing large pads of paper (often on an easel or stand), marking pens of different colors, and somebody with the job of being a scribe, to capture the essence of material being generated by the group. This does not mean that everything said in the group needs to be written down, but activities are often provided to generate ideas in the group and this is a means to get them recorded. We've used tape recorders, audio as well as visual (videotape). On the whole these media are helpful for limited purposes under certain conditions, e.g., the tape of a two hour conversation is often too long to be reviewed and reflected upon in the course of training. One thing that separates the tape recorder from other forms of recording, note-taking and the like, is that its original use bypasses the important aspect of the learner needing to construct representations. Further, if tape recordings are not later constructively listened to or viewed, they are unlikely to yield much insight.

ACTIVE LISTENING

Active listening is simply the importance of attending to what people are saying. Everybody knows that listening is hard although this common fact may not be appreciated for its importance. Actively listening to somebody often requires stopping them and saying you don't understand, or asking them to clarify, or sharing with them what you do understand of what they've said. Although one can be a very attentive listener and follow very well and never feel a need to check back, the simple act of sharing what you understand often shows surprising differences in meaning and is informative to the person who is talking. Listening attentively requires care in that one has to strike a balance between unnecessary interruptions and getting the meaning. In a group of people, the group facilitator plays an important role in helping to clarify and articulate some of the emerging concerns. A leader needs to do more than take responsibility for his/her own listening. He/she may need to say, e.g., "From what Sally is saying it seems to me she has a different understanding from what you're saying." Again, the leader may often need to impose rules to ensure listening on the part of the group, e.g., "one cannot make a critical rebuttal without first taking the time to express what they've understood." (See FLS unit on Communicating and Working with Parents).

PROBLEM SOLVING

The focus of the unit on problem solving provides some direction on this element. Part of its concern is with the issue of ownership, that is, whose problem is it? That is, who has the responsibility or who can take the responsibility, or who wants to take the responsibility for solving the problem. This aspect of problem solving is an important aspect of group learning. Often, a problem may be raised by one person and nobody else is particularly interested. Often people will expect others, including the teaching or training staff, to solve their problems. Often the individual's responsibility for solutions will have to be clarified. Another aspect of problem solving involves the importance of providing opportunity for the participants to generate problems and questions which strike them as relevant and worthy of being solved, as well as to develop the mechanisms or means for pursuing the problems, of seeking a solution, and opportunities to evaluate the results of their activity in ways which are satisfying to them.

PLAY

Play is a terribly important part of learning. It is often said that the child learns by playing, but it should be understood that this is true for adults as well. One way of speaking to the relationship between play and learning is to make reference to Piaget's conception of play in which the construction of representational vehicles is freed from the constraints of reality. For example, the using of a block of wood to represent a toy car or using a stick to represent a horse, are constructive representational activities which do not inolve actual cars or horses. The opportunity to play, in particular ways that have representational properties, is a good way of allowing people the freedom to construct representations that reflect some of the more preconscious aspects of the material being represented. Another aspect of play is its relationship to risks and failures. One of the things that characterizes play is that it's pursued without the consequences of failure. For example, one could play you're "flying an airplane and you crash" without the ill effects that might be associated with this in reality. Likewise, in make believe and pretend one cannot be held strictly accountable for the validity of the material being created. Lastly, in the emotionally and cognitively free climate of play, it is possible to see relationships which would not be possible under conditions of critical analysis and focus.

EMOTIONAL SUPPORT

Throughout these elements and much of the FLS material, there's a concern with affective and emotional support in learning situations. It's important to recognize that representing and sharing with others may involve risk, embarassment, fear of failure, looking poor and stupid, not doing as well as the next person or the last person and so forth. These aspects of social interaction are not be be avoided or to be deprecated as not adult-like. One needs to be aware or to at least be concerned with the emotional risks one might be imposing upon learners. They are to be understood as inevitable elements which must be sensitively handled. It is important to provide a climate in which participants feel comfortable in asking for as well as refusing help and asking for clarification from others, including the instructor, when they're not clear.

SUPPORT FOR CRITICISM AND PRAISE

It's important to provide a climate in which participants can be critical of the learning conditions, of ideas presented by others, their own activity, or critical of the teacher. It's equally important and even harder to achieve, to help people take personal credit for those things they feel good about that they or others have done. One can provide this kind of support by modeling it, by being the first person to say, "I don't really agree with your idea," or "I just did something that I feel very good about," "Something you just said gave me what I've been looking for" and so forth. This certainly does not include "phony" activities of criticism for criticism's sake and praise that's insincere or not deserved. We're talking about the importance of creating an opportunity and a setting in which people can have an exchange of agreements and disagreements, as well as a setting in which people become comfortable with accepting some of the richness of their own activity and insights as well as those of others.

ASSESSING LEARNER PROGRESS

Throughout any span of teaching activity the instructor needs to be concerned with the progress made by students, not only in the instructor's eyes, but in the learner's eyes as well. This need not be a formal assessment. It may well be simply asking people, "How are you doing?" "Are you getting what you wanted?" "Would you like to switch focuses on this?" "What do you feel you're understanding and not understanding?" This can be done by having people keep journals, keep records, write answers to particular questions and problems, describe what they like or didn't like about a particular session, state what they felt was clear and unclear, etc. If one would like a sense of what's happening in a training situation as a whole, records can be collected anonymously

SUPPORTING NEEDS FOR AUTONOMY

Another important element in working with people is to recognize the need for people to "do it themselves," to do it on their own with some autonomy from the dictates of the instructor and others. Quite often, the instructor wants to dominate the stage and specify answers as well as the questions. In many cases, activities are provided for people to generate their answers and the instructor already has the answers in his/her pocket. This style of teaching separates the learner from responsibility for their own learning and from the immense satisfaction and rewards that can be achieved at having invented something that is a step forward for one's self.

EMOTIONAL AND COGNITIVE INTEGRATION

Integration is an important psychological and social concept and one certainly not easily conveyed. A portion of the topic is addressed in the FLS unit titled Teaching Children to Integrate Language Experiences. One aspect of integration involves being able to sort out what an experience means for one's self. This involves being introspective about emotional or affective reactions to particular activities, events, knowledge, and so forth. Part of this involves all the elements we've talked about, e.g., focusing, pacing, autonomy, and play, and part of this involves the simple importance of providing people with an opportunity to reflect privately, to produce a representation, or to express what they feel.

PHYSICAL FACILITIES

A seemingly routine issue turns out to have an immense amount of significance to learning, particularly in a socially interactive training setting which includes dynamic activities, changing of groups, autonomous use of resources, etc. This issue concerns the spatial arrangement of materials and the physical environment of walls, tables and so forth. These issues have strong effects on the operations of people. We have found in our workshops that a large portion of learning activities and the day-by-day revisions of planned activities involved consideration of the physical environment. What types of behavior is supported in it? What are the conflicts and confrontations? The task is to work out a spatial statement that is compatible with the process statement of the training (See FLS unit on Classroom Arrangement).

PHYSIOLOGICAL AND CONVENTIONAL SENSITIVITY

An important aspect of working with people involves a sensitivity to physiological needs such as warmth, food, opportunity for rest, opportunity for quiet and getting away from it all, having water and tissue handy and the availability of coffee or juice in the morning, etc. In our workshops we've made an effort to provide a variety of good eating experiences. Surprisingly, we've achieved a number of our goals through the selection of food and the physical comfort that's been provided, e.g., demonstrating our sensitivity to peoples' individual tastes, illustrating multicultural themes, providing humor -- McDonald burgers on National Food Day -- and providing a pleasant social environment. There are also conventional sensitivities that need to be kept in mind such as the ways in which people conventionally relate, the ways in which people express personal needs, the ways in which people meet together before classes begin and so on.

APPENDIX C:

Materials Related to FLS Research and Evaluation

- "Measurement of Classroom Versus Written Exam Teacher Performance Should Teachers Show or Tell?"
- References

Measurement of Classroom Versus Written Exam Teacher Performance: Should Teachers Show or Tell?

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Abstract

Paper-pencil tests and classroom work-samples were used to evaluate the effectiveness of three learning units for teachers in early childhood education. Half of the sample had BA degrees or above, and half had high school diplomas or less. Both methods assessed the same four competencies: Quality of classroom arrangement, Personalization of a literature experience, Awareness of sense perception uses of materials, and Diversity of teaching strategies which develop children's sense perception. Stability coefficients for the paper-pencil measures ranged from .29 to .83; generalizability coefficients for the work-sample measures ranged from .67 to .98. In general, validity coefficients increased from pre to post for the high school educated teachers, but decreased for the college educated teachers. The validity coefficients were higher than the average correlations between different competencies assessed by different methods. This suggested some degree of discriminant validity of the competency measures. However, the mean correlations between different competencies assessed by the same method suggested that at pre-test, the paper-pencil test might be the more appropriate method for the college educated teachers, and the work-sample method might be more appropriate for the high school educated teachers. After training, discriminant validity improved for both groups.

Historically, the evaluation of student and in-service teachers has involved use of paper-pencil examinations, clinical judgments of efficacy by supervisors or master teachers, or classroom observation of teaching behaviors. An implicit assumption underlying these methods of assessing teacher performance is that they can meaningfully measure the knowledge, traits, attributes, or competencies they are intended to measure among populations with diverse background characteristics.

There is recent evidence, however, that challenges this assumption. Taylor, Marx, and Winne (1975), for example, found that methods of measuring children's self-concept may interact with particular characteristics of the populations they are used with. They concluded that "self-concept instruments purporting to measure similar constructs may be measuring different constructs due to variations in the features of norming samples." Stretching this conclusion to its limit, one might infer that an instrument is measuring what it is intended to measure only within the situation in which it was developed and normed. Thus, the generalizability of interpretations resulting from educational research rests on shaky foundations until the variables and processes associated with measurement methods are systematically studied.

Testing the validity of using teacher assessment methods with diverse populations became the objective for this study based on findings from prior research on teacher performance. Taylor and Chow (1974) found that preschool teachers with a relatively extensive educational background (e.g., B.A. degrees or teaching certificates) tended to perform better on paper-pencil exams assessing knowledge, understanding, and application of particular areas of teaching competency than their less well-educated colleagues (high school diploma or less) before and after participation in an educational training course. They suggested that the differences may have been due to differences in learning ability, but could just as well have resulted from differences on test-related variables such as test taking ability, reading comprehension, or writing skills.

The validity of teacher evaluation methods is of vital importance in the field of early childhood education. Preschools in many states do not require extensive formal teaching preparation and consequently teachers tend to vary widely in their educational background. Given this diversity, can one expect the process of responding to a paper-pencil exam to be as appropriately geared to teachers with limited education as it is to teachers with extensive familiarity with the formal educational process? Might not another method such as classroom behavior measurement have greater validity for teachers without extended education?

These questions became the focus of the study reported in this paper. Specifically, we wished to investigate the validity of two methods of measuring several teaching competencies within two groups of teachers varying in formal education. Convergent and discriminant validity of the two methods -- a paper-pencil exam and a classroom performance method -- were investigated using the multitrait-multimethod matrix proposed by Campbell and Fiske in 1959. Essentially, the matrix allows examination of three facets of validity: a) convergence of independent measurement procedures on a particular psychological trait (or, in this case, teaching competency), b) discriminant validation of measurement procedures constructed to measure a trait or competency from methods measuring other traits or competencies, c) estimates of variance due to method of measurement procedures rather than representative of the trait or competency intended to be measured.

The study is a part of a larger research effort to investigate the effectiveness of an early childhood teacher education program -- the Flexible Learning System (FLS) -- developed at Far West Laboratory in San Francisco. The FLS is a process-based program designed to develop teaching competencies valuable in the early childhood classroom (preschools through third grade). The larger study examined the effects of training with three FLS teacher education modules on teacher performance.

Method

Subjects

A subsample of 32 teachers was drawn from a sample of 110 in-service preschool teachers and assistants employed in Head Start or Children's Centers Programs in San Diego, California. All participants had the autonomy as well as the opportunity to implement changes in classroom arrangment if they so desired. Due to the attrition of one teacher, the final sample of the study consisted of 31 teachers and assistants.

The 32 teachers were selected on the basis of academic degree attained: 16 participants had high school diplomas and 16 participants had B.A. degrees. Twenty-seven participants were teachers and four were teaching assistants. Eighteen of the teachers were under 30 years old; eight were between 30-45 years old; four were over 45 years old. The sample consisted of mostly female teachers (n=27) who were working with preschool students. About half of the sample (n=15) had teaching credentials; less than half of the sample (n=12) were parents. Almost all of the teachers had one to eight years of teaching experience: six had one year experience, thirteen had three years or less experience, and nine had eight years or less experience.

The sixteen "high education" teachers, as a whole, tended to be younger (n=13 under 30) than the "low education" teachers (n=5 under 30), had no children, and possessed teaching credentials. They tended to have slightly less working experience with children than the teachers with lower levels of education. For example, only four of the 16 high education teachers had eight years experience or more as compared to seven of the teachers with low education. On other variables, such as teaching position, sex, and grade level of the children they worked with, the groups were approximately equivalent.

Procedures

As mentioned earlier, 32 teachers were blocked on educational level (16 teachers with a BA degree or above, 16 with a high school diploma or less). Teachers within the two groups were then randomly assigned to one of the three treatments or a control condition, resulting in four high education and four low education teachers per condition. Each of the three treatment groups received training in one of three FLS teacher education modules.

The three modules selected were (a) Physical Arrangement of the Classroom, (b) Enriching Literature Experiences of Children, and (c) Developing Children's Sense Perception.

The training was delivered in one 2-3 hour session each week for a total of six weeks by an instructor trained by Far West Laboratory staff. Three weeks before training began, all teachers received a set of instructions explaining that they would be observed twice before training and twice after, and indicating how they were to prepare for these observations.

At the same time, each teacher received a set of instructional materials for preparing a sensory activity and a reading activity to be taught on the observation occasions. Data on teacher performance during these activities as well as the physical arrangement of the classroom were collected on all 32 teachers. Thus, the Classroom Arrangement treatment group had the opportunity to demonstrate competencies specific to Classroom Arrangement as well as competencies specific to Literature Experience and Sense Perception training. In addition, all of the teachers were administered a written exam by their instructors at the first and last training sessions. The exam assessed the same competencies measured by the work sample method.

The work sample data was collected by a staff of ten part-time research assistants. Trained on procedures and equipped with cameras, tape recorders, books, sensory materials, and a variety of forms and written procedures, individual research assistants made four one-day classroom visits to each of the teachers in the study sample. The first two visits took place during the two weeks immediately after training. The research assistants returned with records of the physical arrangement of each classroom and with audiotape recordings of each teacher interacting with children in her/his own classroom during the conduct of story-reading and sense perception learning experiences. These "work samples" were rated at the Laboratory according to how well they met the criteria specified for each of the four competencies.

The FLS Teacher Education Program

Currently, the Flexible Learning System consists of an initial set of 15 learning modules for adults in early childhood education. It is intended that these modules provide learner-centered, functional-context, competency-based experiences.

The FLS is learner-centered at three levels: at entry into the system, during the process of training, and at exit from the system. Each potential trainee who enters the system has the opportunity to select modules of personal interest. During training, teachers have the opportunity to try out various roles of persons involved in the early childhood educational environment. For example, they are provided experiences in which they play the child role, as well as experiences in which they practice teaching skills with other adults who provide feedback. When learners exit from training, they should be prepared to extend their learnings beyond the module, to "personalize" their learning to fit their individual setting, children's needs, personal, and programmatic teaching goals.

The FLS provides a functional-context experience in that it is designed for learning while on-the-job. Each module provides opportunities for daily application and practice with young children aged four to nine. The system is competency-based in that it is based on the *doing* of teaching acts, as well as *reading* and *hearing* about them. That is, learners participate in group discussions about child development theory and early childhood teaching, and then, as a part of their training implement their knowledge into the classroom. This cycle of discussing-practicing occurs throughout the training process.

The FLS Training Process. Although each of the 15 modules was developed in a unique style, reflecting both the nature of the subject matter and the personal style of the developer, there are six procedural steps common to the training process used in most of the modules.

First, each begins with an introduction which includes performance objectives, learning methods, and learning materials and estimates as to the length of time needed to complete the module. The second step involves a conceptual presentation of the subject matter of the module. This may involve studying the module content and participating in discussions led by the trainer. The third step is aimed at conceptual integration. Activities are presented which require personalized application of the basic concepts and ideas in the module. Once the groundwork of conceptual understanding has been laid, the fourth step requires behavioral production of particular teaching skills. This may involve role-playing sessions with other group members, or trying out the new concepts in devising lesson plans. The fifth step is classroom application. At this point, learners are provided with activity guides that enable them to apply the skills they have learned while working with children in their own classrooms. The sixth step is intended as the final outcome of each of the modules. It involves the learner's "personalization" of the training experiences for application to his/her own situation. This requires a "thinking through" of personal teaching goals and a revision and extension of FLS training to facilitate achievement of them.

Competency Definitions

The four competencies considered in this study were drawn from various FLS training modules. The quality competency was derived from the FLS module Arranging the Classroom for Children. It represented the teacher's ability to structure areas in the classroom so that they effectively serve their functions for her/him and the children. A teacher possessing this competency is able to match the instructional purpose which an area serves with the arrangement of its internal characteristics, thereby facilitating efficient use of classroom areas by the children and decreasing classroom management demands. For example, if an area is intended to facilitate development of fine motor skills through artwork activities, then it should contain appropriate artwork materials, storage of materials should encourage the child's initiation of the activity, it should be isolated from through traffic, should limit by its size the number of children able to use it, etc. To evaluate this competency, the teacher was asked a number of interview questions regarding how areas present in her/his classroom were typically used. Based on the responses, the areas present were classified according to types of areas described in the Classroom Arrangement module. In addition, each of the areas was photographed, and the resulting picture for three particular area types were rated according to quality criteria such as storage, isolation, etc. To illustrate, a teacher might indicate that an area in her classroom is designed to allow a child or two to be by themselves. The FLS module dealing with classroom arrangement defines an area with this purpose as a Private Area -- "an area with no working surfaces (e.g., desks or tables) where a child can go for privacy or isolation from everyone in the classroom." A diagram of the area is made and photographs are taken and brought to the Laboratory to allow rating of how well the internal characteristics of the Private Area serve its purpose. These characteristics include visual isolation, no chairs, no storage of materials, protected from through traffic, and so on. A *quality* score was arrived at by allocating one point for each characteristic present that was recommended in the Classroom Arrangement module. Three area types were rated: a) Learning Area without Seating, b) Learning Area with Seating, and c) Private Area. Two of the areas (a and b above) had ten characteristics specified and the third area had eight. To insure equal weighting of each area, the score for the two areas with ten characteristics were multiplied by a constant of eight, while the area with eight characteristics specified was multiplied by a constant of ten. The scores for all three areas were then summed and divided by the number of areas (3) to obtain a total score.

The competency of *personalization* was derived from the FLS module *Enriching Literature Experiences of Children*. It is a key FLS competency in that it requires knowledge of the child's cultural background, her/his reactions to social situations, etc. A teacher with mastery of the competency *personalization* is one who incorporates the experiences of individual children into the story-reading process. The teacher demonstrated *personalization* if she could describe to a research assistant a child's reaction to the events during a story (e.g., "Tom knew what was going to happen next.") or by describing a child's reaction through a personal experience (e.g., "Maria remembered that the same thing that happened in the story once happened to her.") A *personalization* score was computed by summing the total number of children (max=5) for which the teacher described reactions. The opportunity to demonstrate personalization was provided by the following interview questions:

1. What are the names of the children you read the story to?
2. What do you think that each of the children got out of the story-reading experience?

The competencies of diversity and awareness were derived from the FLS module Developing Children's Sense Perception. Diversity represents the teacher's skill at integrating the child's sensory and cognitive processes by using a variety of questions, statements, or explanation strategies within a sensory activity. The strategies are intended to develop the child's classification skills. The diversity score was computed by summing the number of appropriate teacher strategies used across the 5 primary senses during the sense perception experience. Each strategy was awarded one point. The awareness competency represented the ability of the teacher to identify multiple methods of using materials or objects in activities which facilitates the child's use of a variety of senses. The teacher was shown a set of pencils, then asked: "Please tell me all the ways you can think of using these pencils with the children in your class." If there was no response, she/he was asked: "What activities could you set up for children with these pencils?" When an initial list was recorded, a follow-up question was asked: "Can you think of any other possibilities?" A score was derived by summing all of the uses listed which involved children's using touch, sight, hearing, smell, or taste, multiplying this sum by 100, and dividing it by the total number of sensory plus non-sensory uses given by the teacher.

Instrumentation

Two methods, a classroom performance "work sample" rating and a paper-pencil exam, were administered to both educational subsamples to examine pre- to posttraining differences in teacher performance. Both methods paralleled one another in content subscales and were designed to measure four competencies considered critical for effective early childhood teaching. The methods represented different ends of a conceptual-behavioral performance continuum. That is, the paper-pencil method required trainees to utilize written test-taking skills while the work sample method required trainees to demonstrate competencies behaviorally or orally in a classroom situation.

Work sample method. The work sample method was designed to obtain measures of teachers' classroom application of the four competencies described. Work sample data collection began with a research assistant accompanying each teacher on a tour of his/her classroom. The assistant diagrammed the classroom's physical layout and interviewed the teacher regarding the purpose, use, and arrangement of each activity area with the room. The tour proceeded in a clockwise direction, and several photographs of each area were taken.

Following the classroom tour, each teacher conducted a story telling session with a group of 3-5 children using a children's book sent to her one week earlier. One half of the 32 teachers used the book Snowy Day on the first and third data collection occasions and the book Birthday Presents on the second and fourth occasions. The remaining 16 teachers used the books in reverse order.

The last work sample activity involved the teachers in conducting a sensory experience using a set of beads of different colors and shapes and a set of six small containers of spices. One half of the teachers used beads for the sensory experiences on the first and third data collection occasions and spices on the second and fourth occasions. The remaining half of the teachers used the materials in reverse order: spices on first and third occasions, beads on second and fourth. The teachers conducted the experiences with a group of 3-5 children different from those involved in the story reading activities. The experiences were tape recorded and the tapes brought to the Laboratory for scoring.

Paper-pencil method. The paper-pencil exam contained four subscales, each covering a separate competency. The exam contained 16 items totalling 45 points and had no time limit specified. Table 1 shows the distribution of items and points across competencies. All items were scored at the Laboratory according to a master key. The open-ended items were scored by two raters trained to an 85% level of agreement.

The quality competency was assessed with four multiple-choice items and two short-answer items. One of the four multiple-choice items presented a classroom situation and then asked four separate questions regarding the arrangement of an area. Each of the questions was worth one point and had at least three distractors. The two short-answer items required three and four responses respectively, with each correct response receiving one point. The personalization competency was measured via three multiple-choice items, each worth one point. The diversity competency was assessed with three items. Two of the items were short-answer. One required three responses worth one point each, while the other required two responses worth one point

Table 1. Number of paper-pencil exam items and points per competency.

Competency	No. of items	No. of points
Quality	6	14
Personalization	3	3
Diversity	3	14
Awareness	4	14
Total	16	45

each. The third item required matching a hypothetical teacher's verbal statements with the particular cognitive skills of the child that each would help develop. One point was given for each correct match out of nine possible. The awareness competency was measured by four items. One items was open-ended and worth a maximum of seven points. Two of the four items were short-answer items worth two and four points respectively. The fourth items was a multiple-choice worth one point.

Results and Discussion

The multicompetency-multimethod matrices for the high and low education subsamples before and after FLS training are presented in Tables 2-5. The values in parentheses represent test-retest reliabilities for the competency subscales on the paper-pencil exam and generalizability coefficients (Cronbach, et al., 1974) for the work sample measures. The paper-pencil reliabilities were computed for each of the educational subsamples. As can be seen, the work-sample generalizability coefficients were satisfactory across the measures, but the paper-pencil reliabilities ranged between .29 and .51 for the high education subsample and .29 and .83 for the low education subsample. These low paper-pencil subscale reliabilities limit to some degree the generalizability of the findings.

Tables 6 and 7 summarize the pre- and posttraining performance on and validity of the paper-pencil and work sample methods for the high and low education subsamples. The mean heterocompetency-heteromethod values in the tables were obtained by averaging the correlations between a competency and each of the other competencies measured by a particular method.

Table 2. Pretraining multicompetency-multimethod matrix for high education teachers.

(n=15)

		Paper-Pencil				Work-Sample			
		Qual.	Person.	Div.	Awa.	Qual.	Person.	Div.	Awa.
Paper-Pencil	Quality	(.29)							
	Personalization	-.05	(.51)						
	Diversity	-.20	.01	(.29)					
	Awareness	.10	.09	.13	(.51)				
Work-Sample	Quality	.18	-.35	.27	.02	(.84)			
	Personalization	.11	.13	-.25	-.10	.48	(.67)		
	Diversity	-.36	-.28	.09	.16	.41	-.06	(.78)	
	Awareness	.36	.36	.08	.15	.33	.28	.29	(.98)

Note. The validity values are circled and the reliability values are in parentheses.

Table 3. Pretraining multicompetency-multimethod matrix for low education teachers.

(n=15)

		Paper-Pencil				Work-Sample			
		Qual.	Person.	Div.	Awa.	Qual.	Person.	Div.	Awa.
Paper-Pencil	Quality	(.37)							
	Personalization	.59	(.34)						
	Diversity	.01	-.11	(.29)					
	Awareness	.32	.09	.50	(.83)				
Work-Sample	Quality	-.02	.25	-.20	.04	(.84)			
	Personalization	.36	.41	-.03	0.03	-.10	(.67)		
	Diversity	.01	-.02	.18	.19	-.03	.25	(.78)	
	Awareness	-.38	-.43	.48	.26	.13	-.27	-.06	(.98)

Note. The validity values are circled and the reliability values are in parentheses.

Table 4. Posttraining multicompetency-multimethod matrix for high education teachers.

(n=15)

		Paper-Pencil				Work-Sample			
		Qual.	Person.	Div.	Awa.	Qual.	Person.	Div.	Awa.
Paper-Pencil	Quality	(.29)							
	Personalization	.49	(.51)						
	Diversity	-.12	-.08	(.29)					
	Awareness	.12	-.19	.07	(.51)				
Work-Sample	Quality	.43	.05	.30	-.02	(.84)			
	Personalization	-.19	-.34	-.25	-.23	-.19	(.67)		
	Diversity	-.07	-.04	-.15	-.01	-.10	-.27	(.78)	
	Awareness	.47	.04	.12	.13	.57	-.05	.27	(.98)

Note. The validity values are circled and the reliability values are in parentheses.

Table 5. Posttraining multicompetency-multimethod matrix for low education teachers.

(n=15)

		Paper-Pencil				Work-Sample			
		Qual.	Person.	Div.	Awa.	Qual.	Person.	Div.	Awa.
Paper-Pencil	Quality	(.37)							
	Personalization	-.02	(.34)						
	Diversity	-.17	.44	(.29)					
	Awareness	.44	.25	.52	(.83)				
Work-Sample	Quality	.70	.09	.04	.25	(.84)			
	Personalization	-.30	.00	.18	.13	-.11	(.67)		
	Diversity	.59	.06	.20	.60	.48	.32	(.78)	
	Awareness	-.06	-.14	.01	.36	-.13	.30	-.01	(.98)

Note. The validity values are circled and the reliability values are in parentheses.

Convergent validity. Table 6 indicates that moderate confirmation of the competencies by independent measurement procedures was achieved before training for both the high and low education subsamples. A major exception occurred in the low education sample on the quality competency, for which there was no indication of convergent validity. With this one exception, the competencies seem to be reflecting the teaching constructs they are intended to in the sense that they are confirmed by independent measurement procedures (Campbell and Fiske, p. 83). The picture changes after training, however (Table 7). The mean validity value across competencies decreased for the high education sample but increased for the low education sample. Thus, the competencies seem to become better defined or identified as a result of training for the low but not the high education subsample. This trend did not hold, however, for the personalization competency. Its validity decreased substantially after training for both samples. The validity value for quality, on the other hand, increased substantially after training for both samples, suggesting that the competency became very well defined during the training process.

Discriminant validity. A second aspect of validity is how well the measures can distinguish the competencies from one another. Tests can be invalidated because of too high correlations with other tests purporting to measure different things (Campbell and Fiske, 1959, p. 84). This type of invalidation occurs when heterocompetency-heteromethod values are as high as or exceed the validity values. This does not seem to be a problem in this study however. For both samples, the mean heterocompetency-heteromethod values were consistently lower than the validity values both before and after training, suggesting that the competencies are independent of one

Table 6. Pretraining means and competency interccorrelations for high and low education teachers.

	High Education (n=16)						Low Education (n=15)					
Col. No.	1	2	3	4	5	6	7	8	9	10	11	12
	Mean Score PP	WS	Val.	Mean Het-Het	Mean Hetero-PP	Mean Hetero-WS	PP	WS	Val.	Mean Het-Het	Mean Hetero-PP	Mean Hetero-WS
Quality	7.3	46.4	.18	.008	-.05	.41	6.5	47.0	-.02	.01	.31	.00
Personalization	1.7	0.3	.13	.09	-.03	.23	1.6	0.6	.41	.10	.19	-.04
Diversity	9.9	6.3	.09	-.06	-.02	.21	7.6	6.9	.18	.008	.13	.05
Awareness	5.0	4.7	.15	.11	.30	.29	3.9	6.0	.26	-.09	.30	-.07
Mean$_c$			.14	.002	.003	.29			.21	.007	.24	-.00

Note. Col. No. = column number; Val. = validity values; Mean Het-Het = average heterocompetency-heteromethod value; Mean Hetero-PP = average paper-pencil heterocompetency-monomethod value; Mean Hetero-WS = average work-sample heterocompetency-monomethod value; Mean$_c$ = average value per column.

Table 7. Posttraining means and competency intercorrelations for high and low education teachers.

	High Education (n=16)						Low Education (n=15)					
Col. No.	1	2	3	4	5	6	7	8	9	10	11	12
	Mean Score PP	WS	Val.	Mean Het-Het	Mean Hetero-PP	Mean Hetero-WS	PP	WS	Val.	Mean Het-Het	Mean Hetero-PP	Mean Hetero-WS
Quality	8.17	49.8	.43	.09	.16	.09	7.2	49.8	.70	.10	.08	.08
Personalization	1.67	0.58	-.34	-.10	.07	-.17	2.1	0.82	.00	.003	.22	.17
Diversity	11.6	6.3	-.15	.008	-.04	-.03	10.1	7.5	.20	.25	-.08	.26
Awareness	5.5	5.2	.13	.06	-.05	.07	5.3	7.9	.36	.13	.40	.05
Mean$_c$			.02	.02	.04	-.01			.32	.12	.23	.14

Note. Col. No. = column number; Val. = validity values; Mean Het-Het = average heterocompetency=heteromethod value; Mean Hetero-PP = average paper-pencil heterocompetency-monomethod value; Mean Hetero-WS = average work-sample heterocompetency-monomethod value; Mean$_c$ = average value per column.

another.

Another test of discriminant validation is whether "... a variable correlate higher with an independent effort to measure the same trait than with measures designed to get at different traits which happen to employ the same method (Campbell and Fiske, 1959, p.83)." Essentially, this means that the validity coefficients be larger than the correlations in the monomethod triangles, indicating that the method accounts for minimal score variance.

An analysis of method variance. This aspect of validity is a critical issue in this paper, as there is reason to suspect that a method may influence demonstration of discriminable competencies. Inspection of Table 6 reveals a striking difference in which method accounted for score variance among the subsamples before training. For the high education subsample, the low heterocompetency values indicate that the paper-pencil measure has no method factors (e.g., test form factors, response sets) which generalize across the competencies. The pattern changes for the work-sample method, however. The correlations among competencies measured with this method surpass the validity values as well as the heterocompetency-heteromethod values. The implication is that the work-sample method employs procedures which limit the high education sample's demonstration of the competencies. Interestingly, however, the pattern of method variance was reversed in the low education subsample. The correlations among competencies measured with the work sample method were low, indicating that the method had minimal influence on the demonstration of each of the competencies. The correlations between the competencies when measured with the paper-pencil method were uniformly higher than the validity values and heterocompetency-heteromethod values. The paper-pencil test seems to have features which generalize across the competencies and reduce their discriminant validity.

What happens, however, when educational training is administered? Does the training minimize amount of variance accounted for by a method? This seems to be true in a relative sense for the high education sample. The variance contributed by either method is minimal, suggesting that there is no longer an "apparatus" or procedures factor which accounts for their score variance. Note, however, that the convergent validity drops for every competency except quality, which shows a substantial increase. The low correlations across the columns in Table 6 for the high education sample seem to suggest the competencies become fragmented, with each method measuring separate aspects of each particular competency. It seems as if the high education teachers tend to dissociate the "showing" (performance via the work-sample method) a competency from "telling" (performance via the paper-pencil exam) about it. Their consistently higher mean scores for each of the competencies after training suggests that even if such dissociation does occur, the high education teachers can nonetheless demonstrate improved performance.

The mean scores for the low education teachers also increase following training. In addition, convergent validity improves to the extent that the average paper-pencil method variance no longer surpasses it. It is interesting to note however, that the average correlations between competencies measured with the paper-pencil exam still tend to be high, suggesting that method factors still exist but are not strong enough to prevent demonstration of discriminable competencies.

It should be noted here that most of what has been said above has been based on general trends or means. A close inspection of each competency validity would yield valuable information regarding the interaction of competencies and methods with educational samples. For example, personalization decreases substantially in validity for both samples after training. This finding suggests that the construct was not adequately operationalized by either method, especially since the pre and post mean work sample scores were low for both groups and there was only a small number of personalization items on the paper-pencil test. Quality, on the other hand, showed an encouraging increase in validity and mean performance scores for both samples after training. The method variance contributed by the work sample method for the high education teachers and the paper-pencil exam for the low education teachers decreased substantially, suggesting that both samples learned how to show and tell about the internal arrangement of classroom areas.

Summary

The principle issue addressed in this study consists of the appropriateness of the test contructor's constructs of competencies and methods for measuring them with teachers differing in educational background. When a construct is operationalized in the form of a measure, care is usually exercised in the development of test form factors such as item content and format, administration, and instructions. The careful test user usually examines the quality of these factors and then uses the test to determine the match of the examinee's construct of a competency with the test constructor's. With the limits of low paper-pencil subscale reliabilities in mind, this study suggests a weakness in this process -- namely, the appropriateness of the entire method for the persons it will be used with. Pretraining assessment of high and low education teachers indicated that particular methods tended to contain procedures which generalized across competencies and to a degree invalidated them as dintinguishable indicators of constructs. For the high education sample, the work-sample method accounted for variance in performance scores. Perhaps teachers with a relatively high amount of education have difficulty demonstrating competencies in the classroom in the manner required by the work-sample method, but have no such difficulty demonstrating them on the paper-pencil exam -- a method with which their educational experience makes them highly familiar.

On the other hand, the teachers with relatively less education tend to have minimal score variance accounted for by the work-sample method before training, suggesting that they can demonstrate competencies in the classroom situation. They are not so fortunate with the paper-pencil method. It appears to soak up some of their score variance, suggesting that the test has generalizable factors such as item format, writing requirements, etc. which extend across competencies and limit their differentiation from one another.

In general, these differences in method variance among educational subsamples tended to disappear following training. It is important to note that the most likely reason for this is that the training was based on a process linking theory of child development with an experiential approach to early childhood teaching. Had the link not been made, perhaps the method variance would not have decreased for either sample.

References

Alward, K. R. *Arranging the Classroom for Children.* San Francisco: Far West Laboratory for Educational Research and Development, 1973.

Campbell, D. T., & Fiske, D. W. Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 1959, *56*, 2, 81-105.

Cronbach, L. J., Gleser, G. C., et al. *The Dependability of Behavioral Measurements: Theory of Generalizability for Scores and Profiles.* New York: John Wiley and Sons, Inc., 1972.

Gilbert, B. L. & Finzer, W. F. *Developing Children's Sense Perception.* San Francisco: Far West Laboratory for Educational Research and Development, 1975.

Taylor, J. *Enriching Literature Experiences of Children.* San Francisco: Far West Laboratory for Educational Research and Development, 1975.

Taylor, T. D., Hubner, J. J., Chow, S. H. L., Stripp, S. P., & Tanaka, M. N. *Final Report on Evaluation and Research of the Flexible Learning System: an Early Childhood Teacher Education Program.* San Francisco: Far West Laboratory for Educational Research and Development, 1975.

Taylor, T. D., Chow, S. H. L. *Main Field Test Report for Five Flexible Learning System Competency-Based Training Modules - Milestone B, Work Unit IV.* San Francisco: Far West Laboratory for Educational Research and Development, 1974.

REFERENCES

Hertzberg, Hazel W. "Competency-Based Teacher Education: Does it Have a Past or a Future?" Teachers College Record. Vol. 78, No. 1., September, 1976, p. 3.

Evaluation Staff--Early Childhood Division, Flexible Learning System, Report on Milestone C - Work Unit II, Response Environment Observation Instrument. San Francisco: Far West Laboratory, September, 1974.

Chow, Stanley, Hubner, Judith, Taylor, Terry. Progress Report, Flexible Learning System, Work Unit I - Milestone C. San Francisco: Far West Laboratory, June, 1975.

Chow, Stanley, Rice, Carol, Taylor, Terry. Report on Field Test of Flexible Learning System Competency-Based Training Units, Work Unit V. San Francisco: Far West Laboratory, May, 1975.

Rice, Carol, Taylor, Terry. Progress Report on Evaluation Flexible Learning System Competency-Based Training Modules. San Francisco: Far West Laboratory, September, 1975.

Taylor, Terry. Hubner, Judith., Chow, Stanley., Stripp, Steven., Tanaka, Masako. Final Report on Evaluation and Research of the Flexible Learning System: An Early Childhood Teacher Education Program. San Francisco: Far West Laboratory, November, 1975.

APPENDIX D:

Materials Related to FLS Future Directions

- Locations of FLS Trainers
- FLS in the Child Development Associate program
- "Issues of Providing Process in Training Programs"
- Topics of Trainer Institutes II and III for Mainstreaming Programs

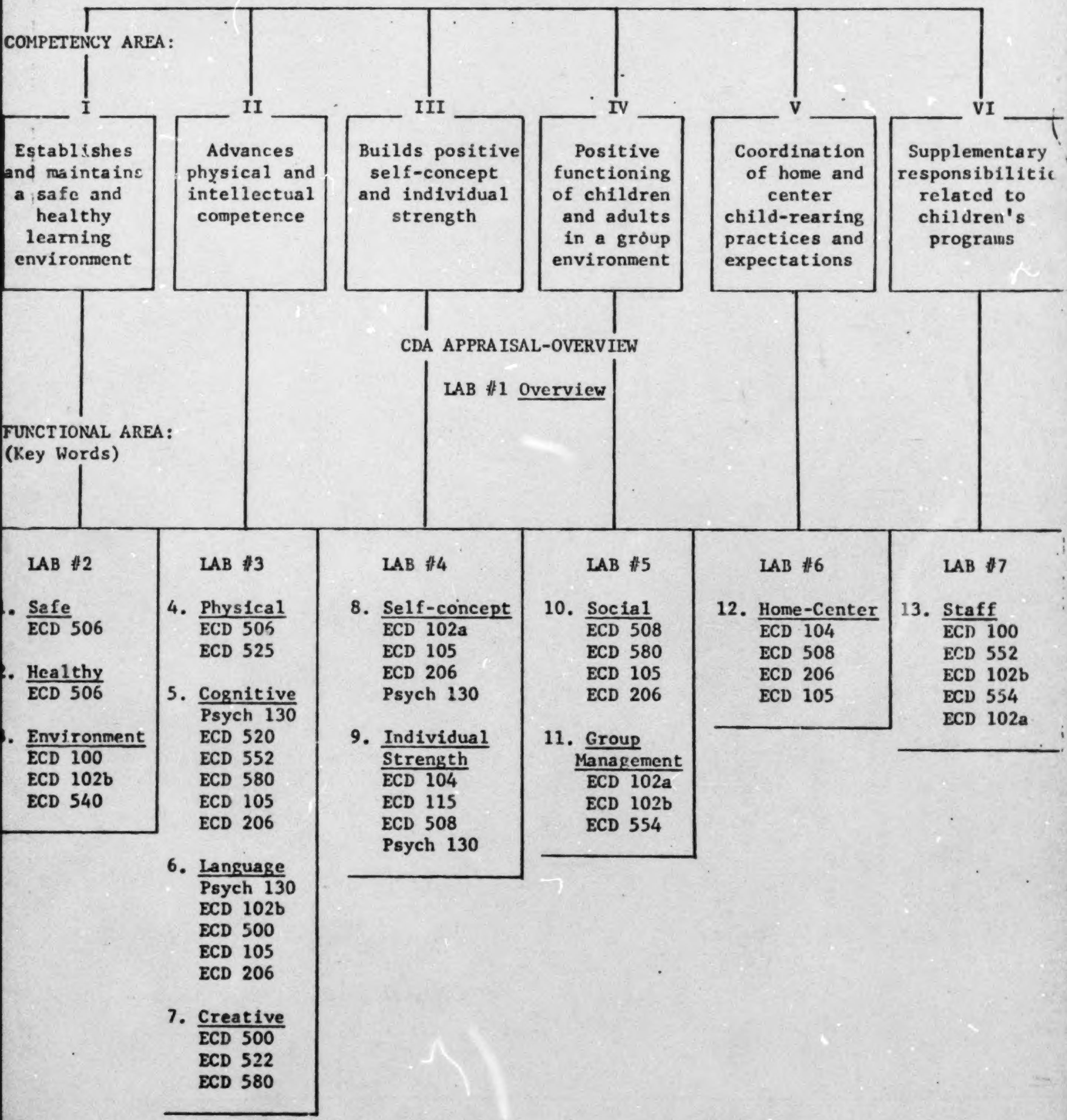
List of locations of FLS Staff Developers

Childrens Centers Resource Center c/o Raphael Weill School	1501 O'Farrell St. San Francisco, CA 94115
Canada College	4200 Farm Hill Blvd. Redwood City, CA 94061
Merritt College	12500 Campus Dr. Oakland, CA 94619
Bing Nursery School Stanford University	850 Escondido Road Stanford, CA 94305
Chinatown Child Development Center	1007 Kearny Street San Francisco, CA 94133
Helen Turner Children's Center	Santa Clara Blvd. Hayward, CA
Mission Child Care	1406 Valencia St. San Francisco, CA 94110
Consultant	3956 Paseo Grande Moraga, CA 94556
Early Childhood Education/ Elementary Instruction, Berk.	1414 Walnut St. Berkeley, CA 94709
Contra Costa College	2600 Mission Bell Drive San Pablo, CA 94806
Riverside Head Start	4015 Lemon Street Riverside, CA 92502
San Diego County Head Start	348 W. Market St. San Diego, CA 92109
Johnston College	University of Redlands Redlands, CA 92372
Humboldt State	Dept. of Home Economics Arcata, CA 95521
Education Coordinator Kedrin Community Health Center	3705 West Olympic Blvd. Los Angeles, CA 90019
San Francisco City College	50 Phelan Avenue San Francisco, CA

San Mateo Parents Nursery School College of San Mateo	1700 Hillsdale Blvd. San Mateo, CA 94402
San Jose City College	2100 Moorpark Avenue San Jose, CA 95128
Chabot College	25555 Hesperian Blvd. Hayward, CA
Follow Through - Berkeley	1414 Walnut Street Berkeley, CA 94709
Mission Head Start	362 Capp St. San Francisco, CA 94115
American Indian Center Head Start	225 Valencia Street San Francisco, CA 94103
Early Childhood Development Program Chaffey Community College	5885 Haven Avenue Alta Loma, CA 91701
Honolulu Community College	874 Dillingham Blvd Honolulu, HI 96817
Dept. of ECE Central Washington State College	Ellensbury, WA 98926
Lincoln Elementary School	200 S. Sampson Ellensburg, WA 98926
Tacoma Public Schools	P.O. Box 1357 Tacoms, WA 98401
University of Nevada	College of Education Reno, NV 89507
Early Childhood Resource Center Curtis School	1421 So. 2200 E. Salt Lake City, UT 84108
Texas Tech University	P.O. Box 4170 Lubbock, TX 79409
Arkansas Social Services	502 Court St. Forrest City, AR 72335
Follow Through Owensboro Board of Education	1334 West Eleventh St. Owensboro, KY 42301
Early Childhood Education Keystone Jr. College	La Plume, PA 18440
NH State Dept of Education	64 North Main St Concord NH 03301
University of New Hampshire	Durham, NH 03824

FLS in the Child Development Associate Program

SIX COMPETENCY AREAS
AND 13 FUNCTIONAL AREAS



COMPETENCY AREA:

FUNCTIONAL AREA:
(Key Words)

CDA APPRAISAL-OVERVIEW

LAB #1 Overview

I
Establishes and maintains a safe and healthy learning environment

LAB #2
. Safe
ECD 506
. Healthy
ECD 506
. Environment
ECD 100
ECD 102b
ECD 540

II
Advances physical and intellectual competence

LAB #3
4. Physical
ECD 506
ECD 525
5. Cognitive
Psych 130
ECD 520
ECD 552
ECD 580
ECD 105
ECD 206
6. Language
Psych 130
ECD 102b
ECD 500
ECD 105
ECD 206
7. Creative
ECD 500
ECD 522
ECD 580

III
Builds positive self-concept and individual strength

LAB #4
8. Self-concept
ECD 102a
ECD 105
ECD 206
Psych 130
9. Individual Strength
ECD 104
ECD 115
ECD 508
Psych 130

IV
Positive functioning of children and adults in a group environment

LAB #5
10. Social
ECD 508
ECD 580
ECD 105
ECD 206
11. Group Management
ECD 102a
ECD 102b
ECD 554

V
Coordination of home and center child-rearing practices and expectations

LAB #6
12. Home-Center
ECD 104
ECD 508
ECD 206
ECD 105

VI
Supplementary responsibiliti related to children's programs

LAB #7
13. Staff
ECD 100
ECD 552
ECD 102b
ECD 554
ECD 102a

Suggestions for Courses: CDA Instruction:

FIRST YEAR

Fall Quarter		Winter		Spring	
ECD 100	4	ECD 102a	4	ECD 554	4
ECD 115	4	Lab	1-7	ECD 102b	4
CDA Appraisal	1				
Lab	1-7		5		8
		Electives	10	Electives	8
	10				
Electives	6	Total	15	Total	16
Total	16				

SECOND YEAR

Fall Quarter		Winter		Spring	
ECD 580	2	ECD 593	4	ECD 552	4
ECD 593	4			ECD 592	3
			4		
	6	Electives	11		7
Electives	10			Electives	8
		Total	15		
Total	16			Total	15

Total courses available for the CDA assessment: 40 quarter units

Additional courses for the certificate:

ECD 104	4	
ECD 105 or		
ECD 206	4	
Psych 130	4	
Psych 150	4	
Electives	9	25 quarter units

Additional courses for the A.A. Degree:

Psych 110	4	
English	4	
Anthropology	4	
Biology	4	
Sociology	4	
Electives	8	28 quarter units

TOTAL: 93 quarter units

CDA Training Leading to a CDA Assessment

COURSES FOR ASSESSMENT			COURSES FOR FIELD EXPERIENCES		COURSES FOR COMPETENCY DEVELOPMENT	
ECD 100	4	Intro	ECD 554 Intern	4	102a and b	4 & 4
ECD 115	4	Methods	ECD 580	2	ECD 104	4
ECD 552	4	Assessment	ECD 593 20 hours	4	~~ECD 105~~	~~4~~
Intro. to CDA	1		ECD 592 15 hours	3	ECD 206	4
plus lab			Resource Center lab assistants	1-6	Psych 130	4
					Psych 150	4
					ECD 500	4
					ECD 506	4
					ECD 508	~~3~~ 2
					ECD 250	4
					ECD 522	4
					ECD 524	2
					ECD 525	2
					ECD 540	4
					ECD 520	4

Chaffey ECD courses and Suggestions for using F.L.S. materials

Class		units	FLS materials
ECD 100	Intro To Early childhood	4	none
ECD 115	Intro To Child study methods	4	Understanding children's play through observation Working with children's concepts
ECD 104	Child, Family and Community	4	Communicating with parents
ECD 105	The Mexican-American child	4	Analyzing children's Books from a Chicano perspective
ECD 206	The Multi-Ethnic child	4	Selecting children's Books with a Black perspective
ECD 102B	principles and practices	4	arranging the classroom for children Managing the pre school classroom problem solving with children Using Toys and game with children
ECD 102B	principles and practices	4	Intro. To E.C.E
Psych 130	Child Growth and Development	4	Helping children Dev. healthy self concepts Working with children concepts Exploring children's Thinking

		units	
ECD 500	Storytelling	4	analyzing children's Books from a classroom perspective selecting children's Books with a Black perspective teaching children to integrate lang. experiences enriching literature experiences of children.
ECD 522	art	4	Developing children's sense perceptions
ECD 520	Science	4	Dev. children's sense perceptions exploring children's Thinking working with children's concepts
ECD 554	Intern Teaching	4	Classroom arrangement
ECD 580	Work experience		problem solving
ECD 552	Field assessment		using Toys and games
ECD 508	parent and child Interaction		Communicating and working with parents
ECD 540	Creative Environment		Classroom arrangement

Working draft -

arrangement of FLS materials in CDA competencies and Chaffey college classes

I Establishes and Maintains a safe and Healthy learning environment

II advances physical and intellectual Competence

Lab # 2

1. Safe
   none
2. Healthy
   none
3. Environment
   Classroom arrangement
   Managing the Classroom
   problem solving
   Using Toys and Games with Children

[illegible]

Lab # 3

4. physical
   none
5. Cognitive
   Exploring Children's Thinking
   Working with Children's concepts
   Developing children's sense perceptions
   Using Toys and games

#6 problem solving

Analyzing children Books from a Chicano persp.
selecting children Books from a Black perspective

6. Lang.
   Teaching Children To integrate lang experience

enriching literature experiences of children <—

7. Creative
Language experience
Children's literature
Choosing Book
Block perspective

III Builds positive self-concept and Individual Strength

Tab #4

8. Self-concept
Intro To ECE
Self-concept
Choosing Book
Block perspective
working with Children's concepts
Exploring children's Thinking

9. Individual Strength
Communicating with parents
observing children's play
working with children's concepts
Exploring children's Thinking

IV positive functioning of children and adults in a group environment

Tab #5

10. Social
Communicating with parents
Using Toys and games
Choosing Book
Block perspective

11. Group Management
Intro to ECE
Self-Concept
arranging the classroom
problem solving
Using Toys and Games
managing the preSchool.

V Coordination
of home and center
Child-rearing
practices and
expectations

Job # 6

12. Home. Center
Communicating
with parents
Choosing Books
Black perspective

VI Supplementary
responsibilities
related to
children's
program

Job # 7

13. Staff
Using Toys + Games
Classroom arrangement
Managing the preschool
problem solving
Intro to ECE
Self-concept

TRAINING TRAINERS:
ISSUES OF PROVIDING PROCESS IN TRAINING PROGRAMS

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In the past decade, colleges and universities training teachers of young children have emphasized the importance of activities using the "discovery method", of encouraging "creativity", of developing strategies for "divergent thinking", and of making learning "meaningful". Most of these classes have been taught generally through lecture, and occasionally with discussion and student projects.

Once in a while, primarily in classes dealing with effective education, other methods of teaching are used -- sharing feelings and fantasies, role playing, individual and group presentations, etc. Sometimes, these classes use "gimmicks" to give the student a sense of participation, or dramatics, or games which have little to do with the subject matter under consideration.

As a trainer of teachers at the community college level, I was often aware that our usual methods of teaching were not reaching some of our students -- many of whom were aides in pre-school or child care programs. Government funded programs such as Head Start brought in exciting ideas of on-site competency training, but we needed to develop good classes which integrated theory and practice, classes to help students discover their own learning styles, to release their own creativity, and to work independently and resourcefully on their own educational interests, as well as that of the children under their supervision.

Some classes in early childhood education lend themselves to student involvement immediately -- such as field work experience or curriculum workshops as music, art, dance, cooking, etc. However, in some classes it is more difficult to develop the kind of participation which leads to significant learning. I found the FLS materials to be extremely helpful in this regard.

Basic to teaching young children is the concept that the process is important - the children are "learning how to learn". For example, we instruct our students not to ask children what they are painting; we believe that children need the freedom to experiment with paints, colors, brushes, and forms. We declare that the "process is the product".

Piaget points out that children need to act upon their environment in order to "assimilate and accommodate". I have often wondered if I were still in the stage of concrete operations as I fidgeted through hours of lectures on how children learn, or creativity, or communication. I believe that for our students also the process is important.

For example, when I first started teaching, I would ask the librarian to make a presentation to our class on children's books. I noticed that as she brought in the large stack of beautifully illustrated picture books and began to read sections of them, some of the students listened intently, some catnapped, and others looked out of the windows. How different it was when students visited the library, picked out those books they considered of good and poor quality, shared opinions and standards, and used the librarian as a resource person and consultant.

For a long time, few people were concerned about the way children or students were taught; today, there is a tremendous interest. It probably started in the 50's with a look at the math and science curricula, and teaching methods as a result of the Sputnik phenomenon; it reached into the 60's with campus student unrest and rebellion which included their dissatisfaction with their education; and in the 70's with national data which showed lowered achievement scores in the basic skills in our schools, and an increasing number of school dropouts.

As an instructor in early childhood education who spends part of her time observing students in different child care centers and pre-school and kindergarten classes, I have often wondered about our teaching methods and our effectiveness. Perhaps, in looking at process, we might ask - the process of teaching or the process of learning? Teachers may feel they have accomplished their job when they "impart knowledge". But their most important job is to help students learn.

In the process of teaching students, at whatever level, the following factors might be considered:

1) There needs to be immediate student involvement. Students must participate directly in the learning process as soon as possible. How do you do this? Materials bring the student into a learning situation at his/her level with a challenging activity -- which throws light on the subject under investigation -- whether it be on self-concept, or arrnagement of the classroom, or problem solving.

2) The material to be learned must be meaningful in a personal way. Students must be able to see the relevancy of the subject matter in terms of their goals. You might start off with the student's thoughts or experiences, tying in what they know to new concepts and activities, and then helping them sort out theories and principles. For example, if I asked you to memorize OTTFFSSENT you would have difficulty, but if you knew that each letter represented the first letter of one, two, three, etc., you will be able to recall it easily. This - a minor problem in "meaning". Help the student center first on his/her classification and seriation and problem solving skills, observe children in their free play,

role playing and vieo presentations, work with young children setting up activities, return to the classroom to discuss her experiences, and to come up with ideas and principles about children's learning.

3) Student motivation is a result of meaningful involvement; it must also include some way in which students can monitor themselves. Help students work in pairs or in groups so that they can get some reaction from other students to their ideas and their efforts. Students also need to see their progress in learning.
4) Students need a mutual support system. In a competitive society of grades and individual achievement, students should have an opportunity to work cooperatively in groups, share their ideas and concerns. Many times one person's ideas set off another student's knowledge and imagination. That students can work individually, in pairs, or in groups. Activities are centered in the classroom, so that students share a common experience. This makes it easier for the shy person, or the student who feels he doesn't know very much to contribute to the group discussion and gain confidence in his/her abilities. It's easier to define problems, and look for possible solutions. Students can also learn to give and take credit. This has importance if you consider the self-esteem of the student.
5) Students should have an opportunity to rehearse their skills. Students need to role play with each other, or in a group, before they work directly with children. By recreating their experiences with other students and with the children, students learn more thoroughly. For example, I know that I can read extensively, and prepare reports about different subject; I really begin to under-

stand them when I am called upon to defend my ideas, or to teach the subject.

6) Learning must be paced by the student, who needs to know the specific nature of the learning task, and what will be expected of him/her. You might plainly set out goals and objectives and performance expectancies. An open philosophical approach solicits student opinion, without strict right or wrong answers. For example, looking at the FLS method, in the unit on self-esteem, the author relates his responses to a teaching situation, but leaves it open to other interpretations. My students and I found we disagreed with him on some incidents, and my students disagreed with me on others. But we had a chance to explore the dynamics of these particular interactions.

7) One of the most difficult tasks in teaching is to help students transfer their learning to real life situations.

In the past, educators thought memorizing Greek and Latin would encourage mental discipline on the part of students, which would then transfer to their understanding of other subjects. However, it has become clear that learning will transfer primarily if students are taught to transfer.

We need to encourage students to generalize relationships to new situations. For example, in teaching sense perception unit, our students are asked to simplify or make more difficult various activities, then are required to set up and diagnose their own, original activities with children.

8) Finally, in the course of study, students need to develop a positive attitude toward self, other students, teachers, subject

matter, and the educational process. This is an area that has hardly been touched by the colleges and the universities, and I read with sorrow about cheating in exams or on lab test results, of students unwilling to share their knowledge with others, or destroying other students' experiments. We are fortunate in early childhood education that the subject matter lends itself to humanistic attitudes and values.

How can we use the units?

The FLS units can be used in many different ways. This is not a cookbook - it's open ended and invites teacher resourcefulness and contributions. Because we have a general curriculum in early childhood education that covers many bases, we cannot give the suggested time allotments to various units; we then encapsulate the heart of the units in a shorter time frame.

Or, these units can be used to extend materials already at hand. For example, the discussion on Montessori schools might include other activities from the FLS sense perception unit, with an examination of the kinds of cognitive skills developed.

The units encourage creative use of the ideas presented -- for example, after using the sample cards in the self-concept unit, my students wrote up cards with incidents from their own experiences for the class to examine.

I have adapted these units to use for several sessions or for six weeks; for PTA or community groups to college classes or in-service training.

The open-ended, on-going process of education, of student involvement in their own learning, the presentation of theoretical and practical ideas, and their adaptability, make the FLS materials especially suitable for instructors in community colleges in early childhood education.

Topics of Trainer Institutes II and III for Mainstreaming Programs

Trainer Institute II: Providing Classroom Activities for Mainstreaming

Core Unit A. Using Toys and Games with Children

This book was written for learners who want to become more skilled in using toys and games to help children (between three and eight years of age) learn some basic skills and concepts. It is a practical, systematic, prescribed introduction to working with children, particularly for those who are new to teaching and for paraprofessional and volunteer staff.

A total of 18 toys and 82 games provide a range of experiences in: classifying, ordering, spatial reasoning, patterning, thinking inductively and deductively, problem solving, memorizing, decoding and encoding language, sensing and numerating. Ordered sequences of learning episodes (games) provide specific learning experiences with each of the toys.

A basic set of eight toys is accompanied by an introductory film plus a film strip and an audio cassette for each toy. Other games are illustrated in cartoon strips. All games are described in short and easily read steps.

Activities involve working with children, viewing audio-visual materials, making classroom observations, extending and modifying existing games.

Learners acquire skills in modeling precise language, contributing to the development of healthy self-concepts, creating conditions for spontaneous learning, helping children develop problem-solving skills, and working with children responsively.

Sample Mainstreaming Issues: Dealing with manipulable toys (e.g., tape puzzles to the table surface and leave only a few pieces in reach of athetoid child who may knock things off); use of sounds and verbal cues for partially sighted child, pacing of time and type of muscle activity; etc.

Core Unit B. Developing Children's Sense Perception

This unit is intended to help practitioners use sensory experience to promote sensory learning in the early childhood years. The focus on sensory-based learning activities is particularly well suited to beginning teachers and paraprofessional staff.

A sequence of learning activities for each sense mode include texture, weight, size,shape, taste, hearing, and sight. The learning-activity sequence involves a sensory experience for adults, constructing a sense-word list, exploring and constructing learning objectives for children, diagnosing sensory skills in children, and creating sense-modality learning experiences for children.

Learning objectives for children incorporate experiences in naming, matching, comparing and contrasting, classifying, ordering, describing, identifying, tracing, predicting, and explaining. Learners are guided in constructing activities tapping these skills in each of the sense modes. Diagnosing children is explored in the context of natural observations and adult probes during normal classroom activities. Learners are guided to develop their own objectives and diagnostic strategies.

Individual and small group activities, classroom observations, and working with children are integrated to achieve: skill in promoting cognitive growth through sensory experience; skill in diagnosing the child's conceptual uses of senses; skill in using diagnosis to plan and provide sensory activities that support cognitive growth; the development of a sense-perception curriculum.

> *Sample Mainstreaming Issues: Optimal use of available modalities; work with tactile defensiveness by preparing child (e.g., for new experience "tell the blind child that the clay is wet and cold" ahead of time); lower level of extraneous noises; introduction of new activities to maximize multisensory use (e.g., let children do finger play with pudding that they can also taste); etc.*

Core Unit C. Teaching Children to Integrate Language Experiences

This unit introduces the concept of teaching language arts in relationship to the development of a child's healthy self-concept. It is a practical book. It provides a teaching process with techniques for helping children to find meaning and to assimilate or integrate their personal experience in language arts activities. Since the focus of the unit is on the process of teaching and learning, what is taken from the unit may be applied to learning activities other than language arts but also others. The unit provides a unique view into the dynamics of creative production and its representation.

It is divided into four sections which may be taught separately or used in sequence. The sections include opportunities for a child to assimilate or integrate his/her own experiences in listening, fantasy, memory of familiar past experiences, and spontaneous classroom activities with expressions in art, movement-dance, and written and oral language. Children are given the opportunity to gain pre-reading and reading skills from these experiences. Each section provides the learner with a guided sequence of activities which includes: presentation of criteria for an integrated language experience; sharing, reviewing and evaluating their experience; planning activities for children based on their experience; implementing their plans; evaluating their implementation and children's responses. The learner has an opportunity to move from using plans as designed in the unit with modifications to extending and further adapting plans for follow-up activities for children, and then using elements from the teaching process in designing plans for their own activities. Many rich examples of plans adapted by learners are provided throughout the text and in the separate learner's resource booklet. Handy forms provide methods for learners and instructors to evaluate activities. Beginning and advanced levels of performance are suggested for all activities and are designed for children from preschool to third grade.

> *Sample Mainstreaming Issues: Adaptation of fantasy approach for some children (e.g.,mentally retarded) who may have difficulties with using internalized imagery; use of recall of recent concrete experiences such as "remember eating an ice cream cone yesterday"; retrieval of past experiences; focusing of attention; use of different modes of communication, (e.g., touching, pulling, gesturing, use of sign language); expression of emotions; etc.*

Core Unit D. Enriching Literature Experiences of Children

This unit acquaints or reminds learners of the potential uses of children's literature and helps them develop guidelines for the selection of books, and methods for planning and facilitating children's experiences with literature. The material is written for those who work with children four to eight years of age.

A variety of short articles and learner activities explore the uses of literature, its importance, and its relationship to self-concept, personal values and personal experiences. Initial criteria for book selection and personalized literature experiences are explored within a wide range of available children's books. Learners are guided to clarification and development of their own values and criteria and their use in developing lesson plans for literature experiences. For example, learners are asked: (1) "What is your favorite book?" (2) "Why do you like it?" After writing down their responses, they are asked to obtain responses to the same questions from five children. This information is used to develop a list of criteria for selecting children's books.

Learner activities involve thought problems, the generation and application of criteria to books and lesson plans, role-playing, group discussions and sharing, and exploration of available literature. This unit is designed for use in a group setting and includes self-assessment activities provided throughout the unit. The entire unit is an adult model of the same techniques being taught for use with children.

> *Sample Mainstreaming Issues: Adaptations of storytelling session for handicapped children, (e.g., blind children need a verbal description of each picture; perhaps taped stories could be developed with such descriptions); use of sign language and miming for deaf children, etc.*

Trainer Institute III: Understanding the Mainstreamed Child

Core Unit A. Communicating and Working with Parents

This unit is designed to give learners insight into the verbal and written communication process with parents, and to give learners practice with the process.

The ten sessions in this unit have been designed as workshops. Each provides opportunities to build upon skills learners already have and to practice new skills in workshops, family, and work settings. Each session has a central theme, and builds upon the preceding sessions.

Unit themes cover: Perception and feedback in communication; communication and awareness; parent roles in the program; facilitating techniques; parent surveys.

Each session begins with sharing and reviewing individual experiences in previous activities. Opportunities are provided to explore the relationship of themes to the learner's personal interests.

Learning activities provide an opportunity to practice several important communication skills: how to respond to an emotional or critical outburst from someone else; how to encourage greater parent participation in your classroom; how to respond when you feel misinterpreted; how to recognize nonverbal messages; and how to set reasonable goals that you can effectively implement.

Sample Mainstreaming Issues: Parents of handicapped children need to work with both parents of normal children (perspective of "all kids go through this phase") and parents of other handicapped children (emotional support); identification of resources such as clinics and services; joining specific parent groups, (e.g., Down's parent associations); etc.

Core Unit B. Problem Solving with Children

This book was written for persons interested in helping children develop problem-solving skills and attitudes. The focus is on offering adults an opportunity to develop skills in helping children assume more and more responsibility for their own problem solving and their own learning. Persons interested in increasing their own problem-solving skills or helping children and adults become better problem solvers should find this book informative. While it was designed to be used with a group of learners, it is capable of independent use.

Problems are treated as opportunities to learn in which individuals or groups want something changed, are personally affected, and in a position to assume responsibility for solving the problem. Problems in the cognitive, social and personal domains are considered. Skills in problem identification and clarification, idea generation, implementation of solutions, and evaluation of results are explored.

Over half of the book is devoted to teaching techniques for guiding children in problem-solving activity. Techniques are grouped under: "tuning in", "drawing out", guiding and supporting the creation of possible solutions. Skills involve: listening; paraphrasing, questioning; creating analogies and imagery; connecting "far-out" ideas to the reality of the problem to be solved.

Recall of personal problem-solving experiences, observations of children, classroom practice, and roleplay are embedded in 26 learner activities. Rich examples of a wide range of classroom problems are interspersed among learner activities.

Sample Mainstreaming Issues: Identification of interpersonal problems related to handicapping conditions(s); successive degrees of support; recognition of dependence/independence needs in various situations; development of parent skills in this area, etc.

Core Unit C. Understanding Children's Play Through Observation

This is a unit on "how to observe children's play" and on the classroom conditions that promote productive play activity. The unit focuses on developing skills in observing and analyzing children's play and relating them to appropriate adult roles.

The unit activities and an accompanying film are organized to help learners develop specific play intervention strategies such as when to ask children questions, provide information, and redirect play. Observation forms are provided.

The unit is designed to be used with a group of fellow learners. Active small group discussion is an important aspect of the learning process for this unit. Completion of this unit should enable learners to: discuss why play is important for a child's growth and development; write objective descriptions of a child's play activity; determine when to provide additional resources for increasing children's learning through play; determine when to intervene, extend, or adapt the play situation to promote children's learning; create a classroom environment to achieve a set of objectives; determine when to participate as a co-player and when to redirect the play situation.

The unit is accompanied by a 28-minute, 16-mm, color-sound film entitled *Observing Children's Play*. This film is a non-narrated sequence of children engaging in social play. The majority of unit activities require making observations from the film.

Sample Mainstreaming Issues: The development of observation skills as related to the handicapped child, both in free play and situations in which play is extended by the adult; use of observation skills in identifying interests and preferences of child; development of record-keeping skills; the recognition of need for reliability and objectivity, etc.

Core Unit D. Exploring Children's Thinking

This three-volume series introduces the learner to children's thinking and its progressive patterns of organization between three and eight years of age. This series is based on Jean Piaget's work and is written for those interested in children's thinking and the application of Piaget's theory to early childhood education.

This series covers the topics of Classification, Part 1; Seriation (order relations), Part 2; and Conservation (quantitative relations), Part 3. The preconceptual, intuitive, and concrete-operational stages of mental development are explored in each of the topic areas. The development of classification is revealed in how children use judgments about similarities and differences and the concepts of "some" and "all". Order relations (seriation) concern how children reason about sequences such as orders from least to most. Quantitative relations concern all notions of units and number and their application in such areas as measurement and arithemetic. The development of quantitative relations is examined with the use of conservation tasks which reveal children's gradual understanding that the arrangement of objects does not affect their amount.

Learner activities consist of thought-problems, role-playing, child interviews, discussions and sharing, reading, and the viewing of four 30-minute videotapes. Pull-out guided interview forms are provided for all interviews. The material is designed to be used with a group of learners although it should be informative to the independent learner. The series contains an introduction to Piaget and his general theory, its educational implications, and transcripts of illustrative videotapes (i.e., *The Growing Mind* set). There is also an annotated bibliography describing most of Piaget's translated works and over 50 other publications and films.

Learners will gain skill and practice in working with children to explore their thinking. Learners will also gain a general insight into the developmental limitations as well as the richness of children's thinking and its relationship to the goals and practices of early childhood education.

Sample Mainstreaming Issues: The construction of physical knowledge in the Piagetian sense in situations where the child has severe limitations on his/her interaction with the environment; the need for more time to experience the manipulative world; the acquisition of spatial relationships and the growth out of egocentrism for the less mobile child, etc.

One further note is in order. It is assumed that the Trainer/Developers will work as teams to make decisions regarding the particular population of children to be addressed and the direction and extent of new development which may be desirable. It is understood that some of these approaches will not be adequate to meet the needs of the extremely handicapped, such as the congenitally blind or deaf child.